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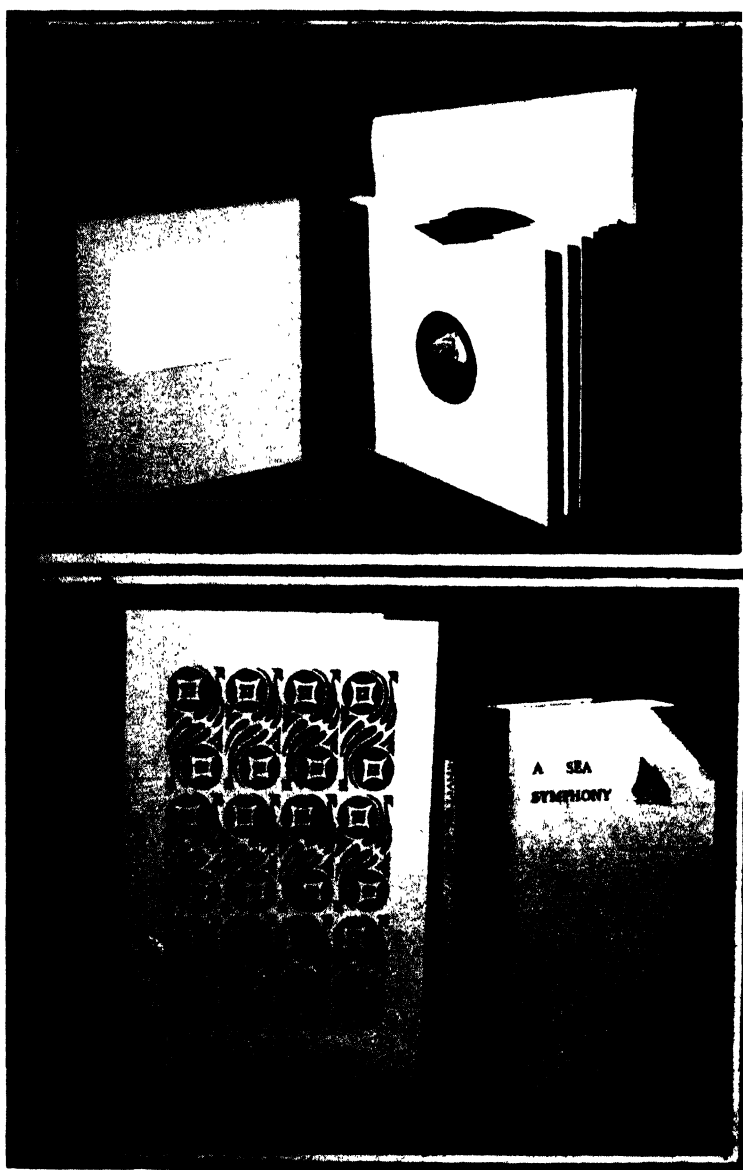
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**BOOK CRAFTS FOR
SCHOOLS**



Constructive Work: Fifth stage

[Frontispiece

BOOK CRAFTS FOR SCHOOLS

THE APPROACH TO BOOKBINDING

BY

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Illustrated with many photographs of technical
processes and specimens of work,
together with numerous line
drawings by the Author

Second Edition
Revised and Enlarged

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ACKNOWLEDGMENT

To the Examinations Board of the Educational Handwork Association I express my thanks for permission to reproduce the Syllabus which forms Appendix 2.

PREFACE TO THE SECOND EDITION

A close observation of book crafts in many schools during the eighteen months since this book was first issued confirms me in the belief that it is only where the subject is taken seriously, with its basis of technique thoroughly laid by carefully graded exercises, that its educational objects are likely to be fully achieved.

Particularly noticeable has been the ease with which the interest of pupils trained on these lines is maintained. Senior scholars, and many of the older ones in junior schools, obviously prefer to learn how to carry out craft processes correctly and accurately; left to themselves without technical instruction, the novelty of the work soon passes, and their interest invariably flags. It would seem that they themselves become weary of ineffectual effort.

I may perhaps be permitted to emphasise the fact that the exercises contained in this volume are to be considered merely as suggestions. To theorise is comparatively easy; the writer who would convince experienced teachers that there is something of permanent educational value in his subject must suggest, at least in some measure, how his theories may be worked out in practice. Beginners at teaching book crafts may find it useful to adopt some or all of the exercises as they stand, but as experience is gained they, like their pupils, will find that a growing mastery of the craft brings with it a steadily increasing ability to undertake original work.

In the Preface to the First Edition I expressed my indebtedness to many teachers who helped me by discussing their problems. To these, and to many others, I again tender my thanks for further suggestions and helpful criticisms, which have enabled me to revise a number of details in the new edition. In particular I must thank Mr. F. J. Stock for assistance with the new section on edge stencilling, and to Messrs. Dryad, Ltd., for much help in obtaining a wider range of suitable materials, which are described in the enlarged Chapter 2.

A. F. C.

Birmingham. *January 1934.*

PREFACE TO THE FIRST EDITION

Some readers may be disposed to question my reasons for adding yet another to the many volumes on bookbinding and kindred crafts for schools. A satisfactory answer to their query will, it is hoped, be found in the pages which follow, and especially in the Introduction.

The widespread and increasing adoption of book crafts in modern schools has been, and is still, in advance of the knowledge of the subject possessed by the majority of teachers, and it is true to say that the demand for teachers able to teach book crafts successfully is, as yet, far in excess of the supply.

Consequently many teachers, faced with the problem of developing craft instruction in their schools, have to make a start as best they can, picking up information as they go from books, and, if they are fortunate, from teachers' classes.

It is in an attempt to meet the needs of such teachers that I have written this book, and throughout its pages I have endeavoured to bear in mind not only the book crafts worker, but the book crafts teacher faced with a class.

In case I may be taken to task for consistently referring to teacher and pupil in the masculine gender, I hasten to state that I have adopted this plan merely to avoid the irritating duplication of personal pronouns. Book crafts have been proved equally suitable for girls and boys, and I address this book to women teachers as well as to their male colleagues.

The occasional use of the imperative mood, especially in the chapters on constructive work, may be regarded similarly as a convenient device to combine brevity with clearness. Once a teacher or pupil has mastered the elements of his craft, he will realise the many possible variations in details of technique and may choose from these as he will; but until he is expert he needs, in my experience, to be given his instruction very clearly and unequivocally if he is not to be discouraged by failure to appreciate apparently trivial, but really important, points.

During the preparation of this book I have come into contact with many teachers who have helped me greatly by discussing the problems of the book crafts course, and to all these, too numerous to mention by name, I tender my sincere thanks, as also to Mr. D. L. Spickernell, for permission to photograph the press shown in Plate Va, and to Mr. J. Deakin, for the photograph which forms Plate Vb.

I must, however, reserve my special thanks for three persons who have been of the utmost assistance in the preparation of illustrative material.

Miss U. Platten and Miss D. G. Warden have brought their artistic experience to bear on the working out of many of the examples of pattern printing and lettering which appear in the Plates.

Mr. C. H. Wake has given unsparingly of his time and ability in making the photographs here printed, which, with few exceptions, are his work.

The willing and skilful co-operation of these three persons has contributed in no small measure to make my task, if not an easy one, at least one of fascinating interest. I am confident that this interest will be shared by all who seriously endeavour to practise the crafts described in the following pages.

A. F. C.

Birmingham. *January 1932.*

CHAPTER I

Introduction

THE PLAN OF THE BOOK

This is not a book on bookbinding, or on cardboard modelling, lino-block or type printing, lettering or pattern design. Yet it contains in some measure the beginnings of all these crafts, co-ordinated in a course of the kind now gaining wide recognition as an educational instrument.

Of the claims of the crafts to a place in the school curriculum it is not the place to speak here. Suffice it to say that I regard them as indisputable.

When we come to examine the suitability of various crafts for use in general education, that group of crafts of which the materials are paper, cardboard and cloth, and of which the products are articles used for the storing of written, drawn or printed records, at once appears to be exceedingly appropriate to our purpose.

It is practicable and economical, and has almost inexhaustible possibilities of suitably graded development both in construction and decoration, making full demands upon the pupils' abilities and resource. It forms a preparation for later work in bookbinding, lettering or block printing, and yet makes a wider appeal than any one of these more specialised crafts.

Above all, it is a real craft, from the first producing articles which are of recognised utility in every walk of life, and which represent the most appropriate applications of the materials which it uses. As such it affords opportunities for the formation of sound taste and judgment in appraising the quality, both technical and artistic, of articles of common use in the life of the people. This important function of a school craft is apt to be overlooked, but its value can hardly be over-estimated.

This group of related crafts is now generally known as "Book Crafts"—a convenient name first used, as far as I am aware, by Mr. F. Goodyear, to whom I am indebted for its suggestion.*

This book represents an attempt to present the various features of a book crafts course in their proper relationship. Too often "decoration" is relegated to a subordinate chapter from which the reader has to extract the information relevant

*F. Goodyear, "Printing and Book Crafts for Schools". *Harrap*. 1926.

to the particular stage of the work at which he happens to be. Throughout the course suggested here the making of an article is not held to be complete until its decoration and lettering, if either be desirable, have been dealt with. Thus decoration and lettering are here developed side by side with constructive technique.

Those who remember the old "Leipsic" course of cardboard modelling, with its sequence of formal geometrical shapes applied with varying success to the production of "useful" articles, will realise that, whatever its artistic shortcomings, it possessed at least two solid virtues: it insisted on the utmost care in measurement, setting-out and construction, and it was very carefully graded in a sequence of increasingly difficult problems.

Both these essential virtues are apt to be lost sight of in the present-day movement towards real crafts, with its sometimes ill-considered attempts at advanced work in bookbinding and related activities.

It is not unusual to find that teachers, who would not think of teaching English or Arithmetic except in a carefully arranged course lasting for several years, will cheerfully attempt a difficult craft problem, such as the backing of a book, after their pupils have had at most but a few months' training. It is not surprising to find that the technical standard reached in these circumstances falls far below what it should be.

I do not wish it to be thought that I am decrying these efforts which are made by many teachers in the desire to start some form of craft in their schools. Such premature attempts at advanced work are born of enthusiasm coupled with slender knowledge. They represent the best that can be done in the circumstances, but, like the beginnings of other educational experiments, they must in time give place to suitably graded courses if the crafts are to have any permanent value as school activities.

If the claims put forward for the inclusion of crafts in the school curriculum are valid, these activities must be taken as seriously as any other subject, and nothing short of the highest possible standards of achievement must be aimed at. Such standards can be reached only if careful consideration is given to every stage of the course of work.

That book crafts, without advancing far into the difficulties of multi-section bookbinding, contain ample content for a four

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or five years' course is, I hope, demonstrated in this book, which does not claim by any means to have exhausted the subject. I have also endeavoured to show that the activities described herein, both constructive and decorative, are capable of being arranged so that their difficulty advances by steps commensurate with the abilities of the growing pupil.

The criticism may be advanced that nowadays the trend of educational method is towards individual activity, and that a systematically arranged course may crystallise (or petrify!) into the rigidity characteristic of the "handwork schemes" of ten or twenty years back. Let there be no mistake about this point—in book crafts as in all other crafts careful training in technique *must* precede original work by the pupil if standards of attainment are to mean anything at all.

Will, then, the pupil, who has in the end to do the work for himself, lack problems because the best way of doing it is indicated to him? Surely none but those who have never attempted to practise a craft can take this view, for those who have tried to perform any operation, however simple, in craft-work will realise the gulf that is fixed between the best instruction and the real grasp of the problem which is to be gained only by actual experience.

Moreover, the aim of this course *is* original activity by the pupil, and the sooner the pupils are able to tackle constructive and decorative problems for themselves the better will be the educational results of the course. But those who think that young children, or adults for that matter, can successfully attack such problems without previous sequential training in technique are gravely under-estimating the difficulty of reaching a high standard in any craft.

It may be desirable to explain why, throughout the book, I have suggested the use of bought equipment and material rather than that of improvised equipment and "waste" cardboard, wallpaper, etc. The first and most important reason for this is that only the worker who knows the *right* way to do a thing can successfully improvise an alternative method. No doubt results comparable with those obtained with bought equipment and material can occasionally be produced with cheap or temporary expedients, but except in the hands of the expert worker these substitutes inevitably lead to a lowering of technical standards. One cannot use a substitute successfully without knowing very clearly what it is a substitute *for*.

The second reason is that in order to make this book of use to teachers of large classes, I have to indicate equipment and materials that can certainly be obtained in quantities and can conveniently be used in the classroom. Wallpaper pattern books may form a source of covering papers ; potatoes, buttons or odd scraps of wood or indiarubber may be used for pattern printing; but the teacher who has to cater for the needs of a class at specified hours cannot always rely upon an adequate supply of such things. If there is not enough to go round ; if the number of suitable papers in the wallpaper book is short of the demand; if the scraps of wood or cotton-reels brought by the pupils are not all equally suitable for the work in hand, then the standard of achievement, judged by the attainments of the whole class and not merely by that of a few "star" pupils, will certainly suffer.

But though bought materials are suggested, I have tried consistently to show how, by a judicious selection of sizes to suit the forms in which materials are usually supplied, they can be used with the greatest economy.

The information given here is very detailed. Vagueness about details means slipshod work in book crafts, for of no crafts can it be more truly said that they consist of masses of detail. Broad and sketchy effects may be suitable elsewhere—here they are utterly out of place. They result in products which fail to serve their material purposes, whereby their educational purposes also are ill served.

The constructions suggested in the course of work are put forward purely as types, and it must not be thought that no variation from them is advocated. But, as has been said, original designing should come gradually with growing mastery of technique. Decorative processes admit of variation, within definite limits, from the first; constructive technique must be understood before successful variation is possible. The inexperienced teacher will find it worth while to work for a time exactly from the exercises here given; the expert will, it is hoped, discover in them some stimulating suggestions.

Part One deals with the fundamental knowledge which should be possessed by the book crafts worker.

First, the materials of the craft are described, with information about the forms in which they are usually to be bought. This is a necessity if waste in their use is to be minimised.

INTRODUCTION

Then comes a chapter on the design of book crafts exercises. Design may be regarded as the reaction between the materials of a craft and the technique which is applied to them; inasmuch as this is usually planned out before starting to work, the chapter on design is placed before those on technique. In some ways this is one of the most important chapters in the book, for unless the teacher can summarise the results of experience in book crafts design he cannot hope successfully to guide his pupils in original work. This chapter also contains some suggestions on the planning of schemes of work.

The last three chapters of Part One deal with the essentials of constructive technique in book crafts. After the material has been selected and the design decided upon, the materials have to be measured, marked out, perhaps folded, cut and finally assembled, usually with an adhesive, into the finished product. These operations, with the addition of sewing and such minor operations as punching and lacing, constitute practically the whole of book crafts constructive technique.

To show to what variety of problems this technique can be applied, and to what extent decorative processes can be developed in book crafts, is the aim of Parts Two and Three, in which are suggested graded exercises, ranging from those suitable for children of eight years old, or even younger, through five stages up to those suitable for children of thirteen and fourteen years old. Each of the five stages contains a chapter on the decorative processes and lettering which may appropriately be developed side by side with the constructive work, and applied to it.

There is one deviation from the steady progression in constructive difficulty of the exercises in the course. At the beginning of each stage are given suggestions for Christmas cards and calendars. Only at first will the construction of these make adequate demands upon the children's powers; yet at all stages they will be popular as seasonable exercises. Later on, therefore, the main advance in these simply constructed articles consists in applying more difficult forms of decoration and lettering to them.

Part Two, which contains the First and Second Stages, is regarded as suitable for junior pupils up to the age of eleven years. In the first stage knife and straight-edge are not needed, the use of cardboard being kept to a minimum. Where it is

used only thin boards are needed, which can be cut with scissors. This stage makes a good deal of use of "construction" paper—*i.e.* manilla paper which is thick enough to be serviceable without stiffening with cardboard. Only towards the end of the stage is cloth introduced in one exercise.

Decorative processes are confined to the use of printing-sticks of ready-made shapes, to produce patterns, and lettering is kept to that possible with the narrow pen familiar to the pupils.

In the Second Stage the pupil is introduced gradually to the use of the knife and straight-edge, and begins seriously to tackle the problems of board covering and of hingeing with cloth. He also learns how to make single-pleated envelopes and pockets from paper; the binding of single-section books advances to the stage of cloth covering and edge trimming, and the Junior course culminates in the making of a substantial cloth-bound album with a laced back.

Decorative processes involve more pattern printing, now with sticks filed by the pupil to various shapes; also paste-coloured papers with combed designs. Lettering is still kept to the narrow pen.

Part Three contains the Third, Fourth and Fifth Stages, and comprises a full course for the Senior school, but one that can, however, only be worked successfully and completely if the pupils have previously passed through the Junior stages of the course.

In the Third Stage the binding of single-section books progresses to flush-trimmed cloth covers, and quarter-binding in boards with cloth back and paper sides. A good deal of substantial work in cloth, including square-pleated pockets, is included, and the closed-back type of laced binding introduced.

In decorative processes the pupil advances to simple lino-stamp cutting and the printing of patterns with the stamps. Lettering includes first exercises in the use of the broad pen.

The Fourth Stage consolidates previous work on the making of board cases, and introduces half- and full-binding in cloth. Ringed books and new methods of making loose reading cases in boards are included; later the use of screw binders and the making of albums with zig-zag hinged backs. First essays in multi-section binding involve pamphlet sewing and a thin book sewn on tapes.

INTRODUCTION

Decorative processes include further work with lino-stamps and the introduction of lino-block printing for simple titles, etc. Stencilling is touched upon, and lettering includes more broad-pen work and the use of Roman lettering as far as is needed for block cutting. The use of printer's type, manipulated singly as printing-sticks for the printing of titles, is described.

The Fifth Stage approaches nearer to bookbinding proper. The re-covering, in boards, of a backed book already sewn is followed by the complete sewing and covering of a multi-section book with square back—a practicable method that avoids the difficulties of rounding and backing and the use of the laying press. Other exercises involve advances in portfolio, reading case, and laced book construction; the making of cloth-lined pockets, the use of press studs and the construction of a gramophone record album.

Decorative processes and lettering include no new principles except the use of "type-high" blocks in the tympan, together with the setting of a single line of type, used alone or in combination with a block. The previous work in pattern printing and lettering is consolidated; the use of large lino-stamps introduced, and considerable advances suggested in lino-block cutting and printing, including simple pictorial work.

Part One

The fundamentals of book crafts construction

CHAPTER 2

The Materials of Book Crafts

THE USE OF "WASTE" MATERIALS AND CHEAP SUBSTITUTES—Wallpaper—"Waste" cardboard—GENERAL PRINCIPLES IN THE SELECTION OF MATERIALS—Economy—Patterned papers—Value of pupils' own decoration—Leather-papers, etc.—PAPER SIZES—Need for a knowledge of paper sizes—Reams, quires, weight per ream—Subdivisions of the sheet; folio, quarto, etc.—SIZES OF PAPER SHEETS—PAGE AND END-PAPERS—Writing papers—White bond paper—Printing paper—Tinted papers—Coloured surface papers: Poster papers—Marbled papers—Drawing paper—COVERING PAPERS—Pastel papers—Printed patterned papers—Duxeen—CONSTRUCTION PAPERS AND TINTED BOARDS—Manilla papers—Tinted boards—Thick "cover" papers—BOARDS—Strawboard—Millboard—BOOK CLOTHS—Qualities and types of cloth—Thin hard cloths—Heavier cloths: buckram—Matt-surface cloths—Furnishing fabrics: cretonnes, linens, etc.—LEATHER—Skiver—Goatskin—ADHESIVES—Paste—"Gloy"—Glue: Scotch glue—Flexible glue—"Liquid" glues—SUNDRY BINDING MATERIALS—Mull—Tape—Thread—"LOOSE-LEAF" BINDING APPLIANCES—Laces—Tags—Paper fasteners—"Tower" Binders—Jointed rings—Screw binders—Eyelets—Press studs—VARIOUS MATERIALS FOR DECORATIVE WORK AND LETTERING.

THE USE OF "WASTE" MATERIALS AND CHEAP SUBSTITUTES

The use of cheap substitutes for the best materials and equipment has been referred to in the General Introduction. Here it must be reaffirmed, concerning materials, that except in cases of the direst necessity (in which event a really complete course of book crafts cannot hope to succeed), "waste" materials should be used only when they are, to all intents and purposes, exactly similar to the bought materials specified for the proper making of the exercises.

Some teachers make much use of "waste" materials such as the cardboard from boot boxes and the wallpaper from specimen books. It is not the author's intention to discourage such laudable efforts to "carry on" under difficulties, but in his experience this practice is too often carried to excess, with the result that materials not exactly suited to their purpose are used. Not only do these offer to the pupils unnecessary difficulties and discouragement, but they often detract from the quality and artistic appearance of the finished work, and consequently from that high standard which is essential if the book crafts are to be worth while as an educational instrument.

While some of the specimens from a wallpaper book may be ideal for book crafts, and may indeed be papers of a far more expensive kind than could normally be bought for the work, others will be too thick for easy manipulation, or too soft and absorbent. Others, again, will be so thin that they crease

BOOK CRAFTS FOR SCHOOLS

and stretch when pasted, and on some the coloured surfaces will be powdery and unfit for constant handling.

Moreover, since wallpaper patterns are designed for use on large surfaces, only a limited range of plain colours, texture effects and small patterns can appropriately be applied to book crafts, and the number of these in a specimen book will soon be exhausted. It is doubtful if the needs of a group even of twenty-four pupils can be suitably met for more than three or four lessons at most if a wallpaper book is the only source of supply of cover papers.

Similarly, while strawboard from old boxes, etc., *may* be as good as the bought article, it is more likely to be thin and of poor quality.

In brief, the standard by which to judge of the suitability of "waste" materials *must* be that of the best bought article, and only with a full knowledge of the right materials can the worker hope successfully to select substitutes.

GENERAL PRINCIPLES IN THE SELECTION OF MATERIALS

It is of course realised that economy in the purchase and consumption of materials is of prime importance. In specifying the materials for the exercises in this book, and in suggesting methods for their use, this has been constantly borne in mind, and the least costly article which will fully serve the purpose has invariably been selected.

It will be noticed that comparatively little use is made of ready-printed patterned papers in the course. An unvarying insistence upon the use of patterns printed by the pupils may at times lead to discouragement, especially among the more backward children, and there will be times in every course when the teacher will be wise to allow his pupils to use ready-printed papers, if he can obtain suitable patterns and qualities.

On the other hand, most printed papers which are cheap enough for general adoption in schools are either drab and unattractive, or crude and garish in design, as well as poor in quality. Since the First Edition of this book was issued, however, it has been found possible to obtain a limited range of papers of reasonably good texture and weight, printed with small and attractive all-over patterns, at a cost well within the reach of schools. Similarly, low-priced papers marbled in

MATERIALS OF BOOK CRAFTS

soft and pleasing colours are now available, and may sometimes be used for end-papers and linings. (See pp. 16-17.)

But whatever may be the facilities for obtaining good and cheap patterned papers, the teacher should not neglect the many opportunities offered by a book crafts course for the selection and use of plain papers and for the decoration of these papers by the children. The most successful course from an educational point of view will be one that produces a preponderance of articles decorated by the pupils themselves, with an occasional application of a well-selected patterned paper. Decorative work can contribute much that is of educational value, and should be regarded as an essential part of a book crafts course, though not necessarily of every exercise in it.

This is the principle which has been followed in the course here suggested. If the Plates which show finished work are studied, it will be seen that only in two articles, *viz.* the single-section book in Plate XVb, and the magazine case in Plate XIXa, have ready-made printed papers been used. In the others plain cover papers have been used, decorated where appropriate by the hand of the maker of the object shown.

The value of such a practice in training the taste of the pupils is incalculable. Over-decoration and garish or tawdry patterns are automatically discouraged, and each article provides opportunities for the careful planning of appropriate decoration and lettering so as to form a coherent whole with the construction. In this way the "content" of each exercise—*i.e.* the sum of the educational opportunities it contains—is vastly greater than if it were decorated without effort beyond that of choosing a patterned paper.

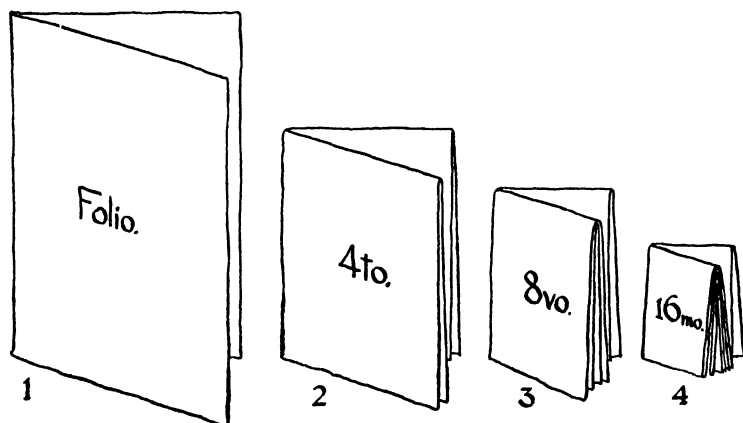
Papers which imitate leather, cloth or even wood are clearly *shams* and as such should be rigorously excluded. It is essential to use cloths and papers which make no pretence of imitating other materials, if the pupils' taste is to be developed on the right lines.

PAPER SIZES

As will be seen in Chapter 3, much economy can be exercised if all articles are designed so as to make the best use of the sizes in which papers are usually to be bought. It is therefore essential for the teacher of book crafts to know something of these sizes, so that he can "cut his coat according to his cloth"—

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a practice which is followed by the trade maker of books and stationery, the sizes of whose products are decided in this way.



Paper for book crafts is usually sold by the ream of 480 sheets or by the quire of 24 sheets. Only the more expensive patterned papers should ever be bought by the sheet, as this is the least economical way of buying.

Paper-makers generally estimate their products by weight, and the common method of indicating the quality, and to some extent the thickness, of a paper is by stating its *weight per ream* in sheets of a stated size. Thus a manilla paper weighing 120 lb. per Double Crown (30"×20") ream will be twice as thick as paper of a similar quality weighing 60 lb. per ream.

The simplest way of dividing a sheet equally without waste is to cut or fold it into halves, quarters, eighths, etc., and sometimes into sixths or twelfths. When a sheet is folded once across it is said to be folded "*folio*" (1), and the size of the folded sheet is known as folio. Folded again it forms a "*quarto*" or 4to (2); again, an "*octavo*" or 8vo (3); and once again, a "*sextodecimo*" or 16mo (4).

Thus these names do not by themselves indicate any definite sizes, but they are given to the corresponding subdivision of any size sheet, e.g. the size of a piece of paper may be "Crown Folio" (cr. fol.); or "Royal Octavo" (roy. 8vo) or "Foolscap Quarto" (f'cap. 4to).

The size of the page of this book is "Demy Octavo," i.e. $8\frac{3}{4}" \times 5\frac{1}{2}"$ trimmed to about $8\frac{3}{8}" \times 5\frac{3}{8}"$.

MATERIALS OF BOOK CRAFTS

Sizes of paper sheets. The following sizes of papers will be most in demand in the book crafts course.

Name	Full Sheet	Folio	Quarto	Octavo	Sexto-decimo
Foolscap ..	17" × 13½"	13½" × 8½"	8½" × 6¼"	6¼" × 4¼"	4¼" × 3½"
Crown ..	20" × 15"	15" × 10"	10" × 7½"	7½" × 5"	5" × 3½"
Large Post..	21" × 16½"	16½" × 10½"	10½" × 8¼"	8¼" × 5¼"	5¼" × 4½"
Demy ..	22½" × 17½"	17½" × 11¼"	11¼" × 8¾"	8¾" × 5½"	5½" × 4¾"
Royal ..	25" × 20"	20" × 12½"	12½" × 10"	10" × 6¼"	6¼" × 5"
Double Crown ..	30" × 20"	20" × 15"	15" × 10"	10" × 7½"	7½" × 5"
Imperial ..	30" × 22"	22" × 15"	15" × 11"	11" × 7½"	7½" × 5½"

NOTE. Sheets supplied by some paper-makers may be very slightly larger than the above sizes.

Trimmed sheets or subdivisions will be rather smaller than the above sizes, *e.g.* a Foolscap Quarto exercise book will be about 8¼" × 6½".

It will be seen that since "Double Crown" is exactly twice the size of "Crown", its subdivisions correspond in size to those next above in Crown size, *e.g.* a Double Crown 8vo is the same as a Crown 4to. Crown size is always used in naming subdivisions of Double Crown sheets, though Double Crown is by far the commoner size in which paper is supplied.

Not all the above sizes will be equally applicable to all kinds of paper, *e.g.* writing papers, exercise book papers, etc., will be available in Foolscap or Large Post sizes and their subdivisions; drawing papers usually in Imperial and its subdivisions, manilla and pastel papers in Double Crown, tinted boards and thick cover papers in Royal; blotting paper in Demy, etc. It will repay the teacher to keep to one or two sizes, such as Double Crown and Royal, in buying his construction and other papers, in order to avoid the waste inevitable if no rule as to size is followed.

PAGE AND END-PAPERS

Writing papers. For most of the notebooks, pads, etc., in the course it will be convenient and cheap to use a writing, typing or exercise book paper ready cut, as commonly used in schools for written work. These papers are usually:

Large Post 4to. Trimmed size 10" × 8" (large exercise book or typing paper size).

Foolscap 4to. Trimmed size $8\frac{1}{4}" \times 6\frac{1}{2}"$ (the usual small exercise book size).

They may be obtained plain or in various rulings.

White bond paper. When a good-quality white paper is needed for end-papers, pages, etc., that known as "white bond paper"—a tough writing paper with a slightly mottled surface and a pleasant texture—will be found most suitable. It is usually supplied in Large Post size, weight about 22 lb. the ream.

Printing paper. For the occasional making of pads, small note-books, etc., by folding large sheets a medium-quality "mill finish" printing paper is useful. It should weigh not less than 36 lb. the Double Crown ream and preferably rather more, and should be bought in this size. It will also be found very useful for practising lettering and for labels, but it is not strong enough for end-papers, and is too thin and absorbent for paste-colour work.

Tinted papers. Tinted papers useful for end-papers, autograph album leaves, etc., are also to be bought in Double Crown size, weight 30 to 40 lb. the ream.

Coloured surface papers: Poster papers. Occasionally a paper with a plain colour on one surface and white on the underside will be useful, generally for end-papers. It is known as "coloured surface paper" and is sold in Double Crown size in a variety of colours. It is not suitable for covering as it does not wear well.

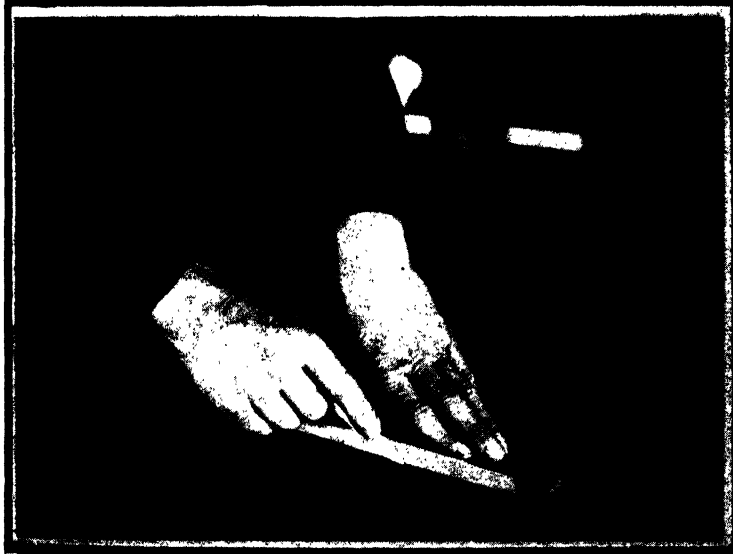
"Poster paper" is similar, but heavier and more vividly coloured, and more expensive. It will seldom be needed unless much cut paper decoration is done.

Marbled papers. The cost of real hand-marbled papers prohibits their general adoption, but it is now possible to obtain papers which are printed to give the effect of marbling. In many of these the colours are too strong and the patterns too crude for tasteful work, but if those printed in one or two delicate and subdued colours are selected, they will be found excellent for occasional use as end-papers and linings. They are sold as "Gay" papers* in Double Crown size at a low cost.

Drawing paper. For paste coloured papers on a white ground, for white end-papers, and for sundry other uses where a paper stronger than printing paper is needed, a cartridge paper such as is commonly used for school drawing may be utilised. For school work it is commonly supplied in Imperial size, or cut to

*Dryad, Ltd., Leicester.

Creasing with the folder



Turning up a fold

PLATE I

Imp. folio, 4to or 8vo. Care should be taken to work on the right side of this paper, which is smoother and has less texture than the wrong side.

COVERING PAPERS

Pastel papers. The only covering paper to be at all widely used during the course is pastel paper. A good pastel paper weighing 60 lb. the Double Crown ream can be had in a variety of pleasing and subdued colours at a low price. Nearly all the exercises illustrated in this book have been covered with such a paper. It is convenient, especially in the junior stages, for practice in pattern printing, etc., to have some ready cut to Crown 4to size, $10" \times 7\frac{1}{2}"$.

Printed patterned papers. Printed papers equal in texture and quality to the above-mentioned pastel papers are likely to be too costly for general school use. They are usually sold in Double Crown or Royal size, but some of the choicer varieties may be smaller, and foreign printed papers will occasionally be met with in metric sizes. They may be bought by the sheet or in assorted quires.

Printed papers of a thinner and cheaper quality are manufactured for box covering in a large variety of patterns. While most of these are unsuitable for book crafts, it is possible with care to select a limited number of small all-over patterns, mostly geometrical, which will serve for occasional use as covering papers or as end-papers for small books.

The papers known as "Small Patterned End-papers" * are of this type. They weigh about 22 lb. the Double Crown ream, and may be bought at a low cost in this size, by the assorted quire or ream.

The magazine case in Plate XIXa is covered with one of these papers; the single-section book in Plate XVb shows the use of a more expensive variety.

Teachers of book crafts should not, however, be misled by the cheapness of these papers, and by their attraction for young children, into thinking that they are as easy to use, or are as suitable for general adoption, as the heavier and stronger pastel paper. Even when the matching or balancing of the pattern offers no difficulty (and this is a matter which, if neglected, inevitably mars the work) the thin and absorbent nature of these papers makes them liable to stretch, crease

*Dryad, Ltd., Leicester.

and tear during manipulation, and so imposes a handicap on the young pupils. Moreover, cheap printed papers quickly show the effects of hard wear in use.

Duxeen. Although it is often claimed that "Duxeen", which is a tough fibrous paper, is a suitable substitute for cloth for book backs, hinges, etc., this material should rarely be used for these purposes, as, especially if it is thin enough to work easily, it is not nearly as strong as cloth. If, on the other hand, a thicker and stronger kind is used it is not only difficult to work but costs nearly as much as cloth. It does not wear well, as its surface tends to become "fluffy" at exposed and hard-worn corners and edges.

Duxeen is, however, useful where a strong material is needed for covering boards for book sides, portfolios, etc. It is sold in rolls, 38" wide, or by the cut yard in this width, in a variety of surface textures and subdued tints. "Single" Duxeen is most useful for covering; the thicker variety is known as "Double" or "lined" Duxeen.

CONSTRUCTION PAPERS AND TINTED BOARDS

Strong and stiff papers, and thin coloured cardboards, which can be used for covers, cases, etc., by themselves, being tough enough to bend for hinges without cloth reinforcements, are classed as "construction papers", though not known in the trade by this name. They will be largely needed in the early stages before the difficulties of covering and cloth work have been mastered by the pupils.

Manilla papers. The best construction paper for general use is a tinted manilla paper. Three thicknesses, *viz.* 80 lb., 100 lb. and 120 lb. the Double Crown ream, will serve all purposes of the course, and can be obtained in Double Crown size in a variety of pleasing tints. This paper is very tough and strong, is stiff, and its surface wears well without soiling.

The thinnest (80 lb.) is useful for small covers, pockets with pleats, strong and smooth linings and occasionally as a cover paper for boards. The thicker kinds are necessary for large and strong work envelopes and pockets, and for all articles where a stiffer paper than the 80 lb. is required.

Tinted boards. Rather thicker than 120 lb. manilla paper, but much less tough, is tinted board or card. "Three-sheet" and "six-sheet" cards are the most useful thicknesses. They are usually sold in Royal size, and can generally be obtained in

MATERIALS OF BOOK CRAFTS

light, and often bright, colours which easily soil. They are sometimes useful for early work where a stiff card is needed, such as in Christmas cards, calendars and beginners' "books", but not where much folding is to be done, as they are apt to crack and break when folded.

Thick "cover" papers. Thick cover papers, 100 lb. or 120 lb. to the Royal ream, are used for similar purposes to the tinted cards, but fold much better because they are tougher. They are made either with a smooth surface ("Plate Finish"), a matt surface ("Velvet Finish") or a slightly textured surface ("Canvas Finish"), and a very beautiful range of colours can be obtained. These stiff papers are specially useful for Christmas cards, calendars and the covers of single-section books. They are called "cover papers" because printers use them largely for stiff covers for price lists, brochures, etc. They are too thick and stiff to be used for covering boards.

BOARDS

All cardboards used in book crafts, bookbinding and printing are known as "Boards".

Strawboard. By far the most useful board for book crafts work is strawboard, which is a mustard-yellow in colour. It is not very tough and cannot be bent sharply, but properly protected and hinged it will serve for all except the heaviest of the exercises.

It is sold by the hundredweight, in sheets 30"×25", and the thickness is indicated by the weight per sheet. Thus 16 oz. strawboard has 112 sheets to the cwt., 8 oz. 224 sheets, 32 oz. 56 sheets, and so on.*

10 oz., which is about $\frac{3}{4}$ " thick, is generally useful for junior work, as it can be cut easily with scissors. 16 oz. is the most useful thickness for senior work, 20 oz. or 24 oz. being occasionally needed for large and heavy articles, though a thick board can always be made on occasion by pasting together two thin ones.

32 oz. or thicker strawboard will only be needed for very large constructive work, but it is useful for cutting boards and for placing between articles being pressed, and a few sheets should always be available in the book crafts workroom.

Millboard. Millboard is the strongest and toughest of all card-

*In trade practice the "counts" of strawboard to the cwt. vary slightly from this, but the numbers given above are sufficiently near to serve as a guide when ordering.

BOOK CRAFTS FOR SCHOOLS

boards, and is always used in the best bookbinding. It is, however, too hard to cut and too expensive for general adoption in book crafts, but may on occasion be used for advanced work when a specially strong board is needed. It is sold in various sizes; "Extra Royal", $28\frac{1}{2}" \times 21\frac{1}{2}"$, is a useful size in which to buy it, by the sheet or dozen sheets.

Light grey millboard is quite good enough for book crafts purposes; the "black" millboard, which is the best quality, is so hard and tough as to defy cutting by any but special shears.

The four thicknesses of millboard most useful for book crafts work are:

"Sixpenny" (6p. or 6d.)	..	..	about $\frac{3}{8}"$	thick
"Sevenpenny" (7p. or 7d.)	..	..	" $\frac{1}{2}"$	"
"Eightpenny" (8p. or 8d.)	..	..	" $\frac{5}{8}"$	"
"Eightpenny one cross" (8p.X or 8d.X)	..	..	" $\frac{1}{2}"$	"

Extra Royal 4to pieces ($14\frac{1}{4}" \times 10\frac{3}{4}"$) of 8d.X millboard make excellent and lasting cutting boards for general work.

BOOK CLOTHS

For all hinges, book backs, corners, etc., where strength is required, and indeed, as an essential material in all book crafts constructions except in the very earliest stages, book-binder's cloth is needed. An almost endless variety of colours, surfaces and strengths can be obtained, from which the book crafts worker will be wise to choose a few only and to keep to them.

Qualities of cloth. All cloths are sold by the yard from rolls, usually 38" wide. The different makers have as many different ways of describing the qualities of their cloths; as an indication of the quality to be sought it may be taken that a cloth costing much less than 1s. a yard, retail, from a reputable firm is not likely to be suitable for book crafts, as it is likely to be such poor quality as to cause the pupils endless difficulty in working it.

Types of cloth. Bookbinder's cloth may be classified into two main types: hard cloths which contain much filling or "dressing", and the softer matt surface cloths.

Cloth of the first type is the most widely used. Its woven texture is filled with "dressing" consisting of pigments and starchy substances. The effect of this is to make the cloth hard and stiff, so that it will crackle when bent. The back

surface is usually smooth and polished, and it is less absorbent than the matt-surface variety.

Included among cloths of this kind are the thin medium-priced hard cloths which are easiest to manipulate, and which will be most often used in the Course, together with the heavier cloths and the buckram described below.

Thin, hard cloths for general work. For beginners and for most general work a thin, hard cloth will be found most suitable. The buyer will not go far wrong if he asks for "Glossy", "Linen", "Vellum" or "Buckram" *finished* thin cloth. Cloths with heavily embossed surfaces should not be used; they are less tasteful in appearance than the plainer kinds, and the raised patterns are liable to be flattened out when pasted and manipulated by the inexperienced worker.

Heavier Cloths are desirable for advanced and large work, and if the teacher is concerned about the cost of these he should remember that a yard of cloth 38" wide will cover a considerable number of books, especially if used only for backs and corners.

Cloth costing about 2s. a yard, retail, in "Art Canvas", "Art Vellum" or "Art Linen" surfaces will be found suitable for pupils' work.

Buckram. The strongest cloth of all, useful for heavy reference books, record albums, etc., is known as "Buckram". "Single Warp" buckram, costing about 2s. a yard, is thinner and easier to work than "Double Warp" buckram, which costs about 2s. 6d. a yard. Both qualities can be obtained in a wide range of colours.

Matt-surface cloths. Of comparatively recent introduction, these softer cloths resemble ordinary linen or fine canvas fabrics. Their surface is rough and coarse in texture, and since the cloth contains comparatively little "dressing" it is pliable and will not crackle when bent.

This kind of cloth is pleasing in appearance, can be obtained in a number of beautiful shades, and has the advantage that it is possible to print patterns and lettering upon it with water-colour and "Gloy" (see p. 101). The hard cloths require printer's ink for this purpose.

On the other hand, it is rather less easy to make a neat "job" with this soft cloth than with the harder cloths described above. It is liable to fray at exposed edges and, being loose in texture, tends to soak up the paste and to stretch and buckle readily.

BOOK CRAFTS FOR SCHOOLS

A medium quality which is reasonably free from these difficulties in working can, however, be purchased as cheaply as thin cloth of the harder type, and will prove a useful cloth for occasional work, especially as a means of introducing variety into the course.

Beginners should not as a rule be given this cloth until they have had some experience in working the stiffer and harder thin cloth.

Furnishing fabrics. Very occasionally a pleasing effect in a book crafts exercise may be obtained by using a piece of ordinary coloured linen, or a printed cotton or cretonne. These materials are not, however, to be recommended for wide use. In the first place, they are likely to be little, if any, cheaper than bookbinder's cloth; in the second, they are difficult to work. They are apt to be "lumpy" at folds and turned-over edges; they tend to buckle and crease when pasted; it is difficult to set out and cut them accurately; and, since they contain little "dressing", the paste is likely to soak through them to the front and so mar the appearance of the finished article.

LEATHER

Skiver. In a few of the later exercises leather may be used, but only by the most advanced pupils and only for small book backs, pocket books, etc. For such purposes a thick "skiver" leather, which is a split sheepskin, can be obtained in various colours. It is not very strong, but is fairly easy to work as it requires little or no paring at the edges, and it will serve as an introduction to the use of better leathers.

Goatskin. A stronger leather is "natural goat", but even if thin pieces of this are selected they will need to be pared, an operation possible only to the oldest pupils.

The more expensive kinds of bookbinding leathers are not suitable for book crafts up to the stages indicated in this book.

Often a parcel of leather cuttings can be obtained very cheaply, the cuttings being usually sold by weight at a shilling or so per pound. From such a parcel can be selected many pieces suitable for all the purposes of a senior book crafts course.

ADHESIVES

Paste. Paste will be very largely used throughout the course. The making of flour paste is at best a troublesome process,

liable to be uncertain in its results, and in its place one of the several excellent cold-water paste powders now on the market should be used.

Such a powder can be kept indefinitely if stored in a tin box, and just enough paste for the needs of the lesson can be quickly and easily prepared as described in Chapter 6.

"Dryad", "Tapwata" and "Rex" paste powders have all been found admirable for constructive work in book crafts.

"Gloy". For pattern printing with sticks or lino-stamps, for printing from lino-blocks and for paste-colour papers the proprietary adhesive known as "Gloy" is strongly recommended. No doubt other pastes could be used as substitutes for it, but "Gloy" is of such uniform consistency and is so little trouble in use that it is worth while to adopt it in preference to a substitute. It is not very cheap, but only small quantities will be needed for decorative work. It is both too costly and too thin for general use in construction.

Glue: Scotch glue. If a cake glue, which requires to be simmered in a proper glue-kettle, is used, the best kind to purchase is Scotch glue. It is sold by the pound, in cakes about $8" \times 4" \times \frac{1}{2}"$, and glue of a good quality should be transparent, of a deep amber colour and brittle when purchased. It should not be "muddy" in appearance when held up to a strong light, and it should not be possible to bend the cakes when they are fresh.

Flexible glue. Bookbinder's flexible glue is somewhat similar, but is sold in large cakes which are soft and rubbery, and which do not need preliminary soaking (see Chapter 6). Flexible glue can also be bought in a white variety, which is less liable to soil delicate covering materials.

"Liquid" glues. For fixing linoleum on to corks and blocks for pattern and block printing, it is a convenience to have at hand a strong adhesive which does not require preparation. As it is only needed in small quantities, a really liquid glue such as "Seccotine" or "Dryad Liquid Glue", sold in tubes, will be admirable for these uses. Few, if any, of the so-called "liquid" glues sold in tins at a reasonable price are thin enough for working at the usual school temperatures, but they may be more convenient than the solid glues for book crafts work because, instead of needing to be simmered in a special kettle, the container need only be stood for a time in a dish of hot water. If such a glue is wanted, "Croid" brand will serve all purposes, being reliable in use.

BOOK CRAFTS FOR SCHOOLS

SUNDRY BINDING MATERIALS

Mull. Mull, or bookbinder's muslin, will be needed throughout the course. It is sold by the yard, usually 38" wide, and is very cheap, a reliable quality being obtainable for about 4d. a yard.

Tape. Tape will be needed for binding multi-section books, and will also be useful for portfolio ties, etc. An unbleached linen tape, $\frac{1}{2}$ " or $\frac{5}{8}$ " wide, will be found best. It is sold in 12-yard pieces, and the stiffened kind, which contains a good deal of "dressing", should be chosen.

Thread. For occasional sewing a white or unbleached carpet thread can be used. For large quantities it is more economical to buy a bookbinder's thread, of which there are many varieties. That known as "No. 16, 2-cord" unbleached linen thread will serve most book crafts purposes; if a finer thread is needed for sewing thick books "No. 25, 2-cord" is suitable. It is sold by weight, usually in $\frac{1}{2}$ -oz. or 1-oz. hanks, but if possible it should be bought wound on reels or "cops" which are more convenient in use.

"LOOSE-LEAF" BINDING APPLIANCES

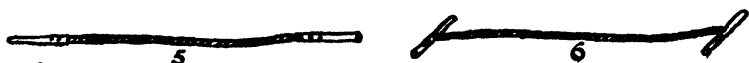
There is a large variety of these on the market, but only a few types are suitable for general adoption in school book crafts, owing to their low cost and ease of manipulation.

Laces. Laces will be needed for many single-sheet bindings at all stages. For small work a single-twist 3-ply knitting cotton, about $\frac{1}{16}$ " diameter, is excellent, and is very cheap: being obtainable in a variety of pleasing colours at about 2s. 3d. a lb.

A heavier cotton cord for lacing is a double-twist cord, about $\frac{3}{32}$ " diameter. It has a better appearance than the knitting cotton. It is usually sold by the yard or dozen yards, in many colours.

Special laces with tags for loose-leaf bindings can be obtained, but except in short lengths these tagged laces will rarely be needed, and it will be more economical to buy the lacing in a continuous length without tags.

Tags. The short laces with tags are very useful for fixing pages loosely in manilla folders such as those in Plate XI.



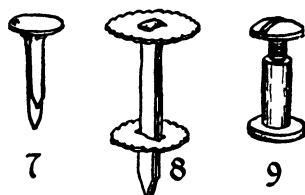
They are of two kinds, "Straight Tags" (5) and "Cross Tags" (6), and can be purchased from any law stationer.

Christmas cards, programmes and other articles requiring a light decorative lacing can be tied with artificial knitting silk or with narrow ribbon.

In one exercise, the laced book in the Frontispiece, leather lacings are used. These are thongs such as are used for leather-work.

Paper fasteners. For the making of jotters, memorandum pads, etc., in the early stages, brass paper fasteners of the type shown in 7 are useful. They are common in any school.

"Tower" Binders. A refinement of this type of fastener is the "Tower" Binder (8). This is made of tin-plate, and has a slotted washer over which the two strips of the fastener are bent. It is useful for light manilla files, etc., and is shown in use in Plate XIXa. "Tower" Binders are sold by the gross, and are inexpensive. The most suitable lengths are 1", 1½" and 2".



Jointed rings. Jointed or hinged rings, made of steel, are necessary for loose-leaf books where it is desirable to change the leaves easily and quickly, and to open the book flat. They are sold by the dozen or gross in many sizes, of which ¾", 1" and 1¼" diameter will be found the most useful.

Screw binders. Screw binders, sometimes known as "Inter-screws", are shown in 9. They are made of brass, and can be bought by the dozen or gross. Those which close to ½", ¾", 1" and 1¼" are the most useful sizes. These are the minimum thicknesses of the books for which each size can be used: each screw will extend to accommodate a book rather thicker than the above size.

Eyelets. Eyelets will often be used throughout the course. They can be bought in boxes of 500 or 1,000, in plain brass and in a variety of colours. If coloured eyelets are purchased care should be taken to see that they are of good quality, as the enamel readily chips from inferior eyelets.

BOOK CRAFTS FOR SCHOOLS

No. 16 size eyelet will be found to answer for all usual purposes in book crafts.

Press studs. These will seldom be needed—when they are they can be obtained from any dealer in leatherwork supplies, in various colours to match the work in hand. The 9-millimetre diameter is best for small articles such as the Pocket-book in Plate XXIVb; for large exercises such as the Record Album in the same Plate the 12-millimetre diameter is necessary.

VARIOUS MATERIALS FOR DECORATIVE WORK AND LETTERING

The various colours, inks, printing inks, linoleum and other sundries for decorative work and lettering are described in the appropriate chapters on these subjects (see Chapters 8, 10, 12, 14, 16).

CHAPTER 3

Design in Book Crafts

THE FACTORS WHICH GOVERN DESIGN—Questions to be answered—Detailed consideration: sizes—materials—construction—appearance—use of article—economy of material—grading of constructive technique—decoration and lettering—TECHNICAL TERMS—ESSENTIAL CONSTRUCTIVE POINTS—SECTIONED BOOKS—SINGLE-SHEET BINDINGS—Binding devices for single sheets—Single-sheet binding types—THE PLANNING OF SCHEMES OF WORK

THE FACTORS WHICH GOVERN DESIGN

Every article, however simple, made by the book crafts worker has first of all to be designed, *i.e.* to be planned in all its details.

The exercises in this course represent not merely arbitrary decisions, but attempts to allow for many factors which enter into the problem of design. In so far as the worker, whether teacher or pupil, may accept these designs and copy the exercises, he will not need to bother about design, but immediately he desires to originate exercises for himself, or to depart in the least particular from the details here given, he will have to make his own decisions, and begin to think about design for himself. Since the ultimate aim of any craft course is original work, the factors which govern the design of an article are of the greatest importance.

What, then, are these factors?

They may be classified into two groups: First, those which apply to the design of the article as a commodity pure and simple, *i.e.* the factors which bear on its material as distinct from its educative purpose. Second, those which bear on the function of the article as an exercise in a school course.

It must be emphasised before going further that the first group of factors is of prime importance, and should *never* give way to the second. If an article cannot be designed to fit into a school book crafts course without impairing its efficiency as an article of common use, it should be left out entirely.

The questions to be asked of, and answered satisfactorily by, the designer of a book crafts exercise may therefore be grouped as follows:

1 *Does it serve its material purpose?*

- (a) Are the sizes and proportions most appropriate to its ultimate use?
- (b) Are the materials selected so as to produce an article which will wear well and be convenient to use?

- (c) Is the construction such as to produce a durable and convenient article?
- (d) Is the appearance of the article as pleasing as possible?
- 2 *Does it serve its educational purpose?*
 - (a) Is it an article of obvious and common use either in school or home, and as such attractive to the pupil?
 - (b) Are the materials selected with due regard to their availability and cost?
 - (c) Is the technique involved in its construction suitable to the particular stage of the course which the pupil has reached?
 - (d) Are the decoration and lettering within the powers of the pupil, and do they fit in with the stage which the pupil reached in these matters?

These factors may now be considered in more detail.

1 (a). *Sizes.* The main dimensions are often determined by the function of the article, *e.g.* a cover for exercise paper, a case for postcards, an album for gramophone records, must be the right sizes to accommodate these things. Where the sizes are not thus rigidly decided, they should be chosen so as to produce an article which will be most convenient in use. Under 2 (b) below are given other considerations which influence the size of an article for a school course.

1 (b). *Materials.* Information about the nature of book crafts materials is given in Chapter 2. This information should be used in their selection for any given purpose.

1 (c). *Construction.* The construction must not only produce an article convenient in use, but it must be influenced by the nature of the materials and the technique which is possible with them. Thus it would be possible to design an article which, theoretically, would be convenient in use but which would be almost impossible to make with ordinary technique, or which would not last because of the liberties taken with the materials used. Later on in this chapter details are given concerning some important points in constructive design.

1 (d). *Appearance.* The appearance of an article depends upon the proportions of its parts; upon the colours and textures of its materials; and upon the applied decoration and lettering.

The proportions are generally settled by reference to the function of the article, or by the sizes chosen for economy in the

use of materials. The colours and textures of the materials, in so far as there is any choice, must be decided by the designer. Here a close connection with the school art course, with its study of colour, is especially desirable. The applied decoration and lettering may be to some extent decided by the function of the article. In so far as there may be variation, the designer must draw upon his skill and knowledge of decorative processes; but he must always bear in mind the definite limitations of the process selected.

2 (a) *Use of article.* Every exercise in a book crafts course should fulfil an obvious and common demand. Even the Christmas cards and calendars, which are less permanent in construction than most of the articles suggested here, are appropriate to their purpose and are as strong as their use justifies, and there is no doubt about their seasonal popularity.

Many exercises result in products especially useful in school, where the pupil is habitually handling books and papers; one of the outstanding values of book crafts as a school subject is due to this factor. Things suitable for real use in the homes of many of the pupils are less easy to devise, and it is a common error in book crafts courses to act as if the average home were a kind of office in which files and folders are in constant demand, or a library in which there is a steady supply of books needing to be bound. Without falling into this error, it is possible to design jotters, shopping lists and memorandum pads which will find a use in the humblest kitchen; writing cases which will serve the needs of the correspondence in which everyone must at some time indulge; loose reading cases which will make untidy magazines neat and attractive in use; and simple bindings for such small books as children may treasure.

2 (b). *Economy of material.* Much has been said in other parts of this book about the importance of economy in the use of materials, and the teacher who, presumably, has to handle a large group of pupils must see that the sizes of the exercises are chosen, not only so that the articles serve their material purpose, but also to utilise to the full every sheet of paper or board and roll of cloth which is consumed. This can only be done if the designer has a knowledge of the forms in which materials are supplied, so that wherever possible the simpler subdivisions of the sheet may be used in deciding the sizes of the finished product.

BOOK CRAFTS FOR SCHOOLS

Thus in designing a Christmas card or a work envelope, the designer does not arbitrarily decide upon a size. The question he has to answer is: "What Christmas card (or work envelope) can I best make from a Crown Octavo (or Crown) sheet?"

2 (c). *Grading of constructive technique.* The grading of constructive technique to suit the abilities of the pupils throughout the five years' course suggested here is indicated in the summary which is given in Chapter 1 (pp. 5-7).

Similar considerations should influence the design of any article whatever that is to be made as part of a school course.

Unless the teacher is very experienced indeed in the craft, he may not be able to foresee all the difficulties of construction in a design, and its making may be found to need some operation which is beyond the powers of most pupils of the age for which it is intended. Some of the exercises in this course had to be modified in design because, on first working them out in detail, although mainly suitable for a given stage, they necessitated some minor and unforeseen process which rendered them too difficult. Thus, before finally deciding upon a design that is to be used by a number of pupils, *the teacher should actually make the article himself.*

2 (d). *Decoration and lettering.* The decoration and lettering to be applied to the exercises should be similarly graded, and suggestions for this grading are to be found in the chapters on these subjects which accompany the chapters on constructive work. Over-decoration should be avoided; such patterns as are applied should be the natural outcome of the process used. Thus stick- or lino-stamp printing should *appear what it is*, and should not simulate detailed and naturalistic painting.

It is of the greatest importance that decoration and lettering, if they are needed, should be considered together with construction when an article is being designed.

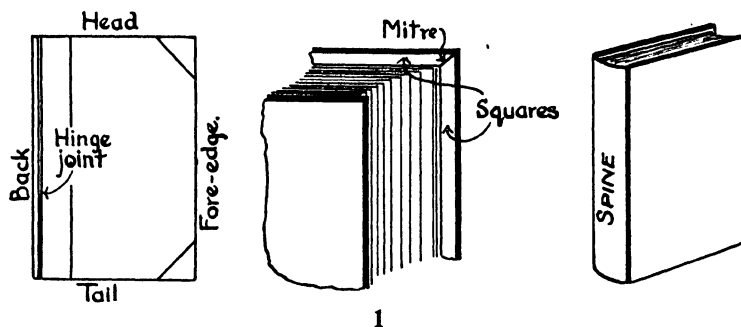
TECHNICAL TERMS

Before going into certain points of construction which affect design, it is necessary to explain a few technical terms with which the teacher will be wise to make himself familiar.

In 1 is shown the names used for the various parts of a book, and in 2 three types of covering. "Quarter-binding" (2a) has the stronger material (cloth or leather) on the back, and the

DESIGN IN BOOK CRAFTS

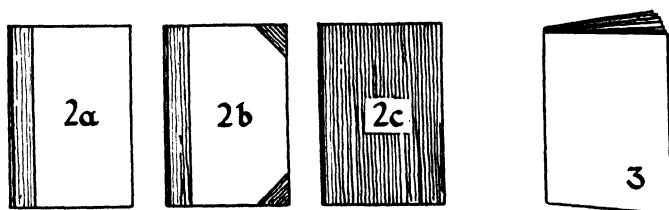
weaker material (paper or cloth) on the sides. “Half-binding” is similar, but has the corners as well as the back covered with the stronger material (2b). In “whole binding” (2c) the whole of the book, back and sides, is covered with the same material.



1

Cardboard, of whatever kind, is referred to in book crafts as “board”, and the sides of a book are known as the “boards”.

A number of leaves put together with the folds at the back are called a “Section” (3). Until late in the course only “single-section” books, *i.e.* those with only one such unit for the pages,



are dealt with; later on “multi-section” books, which contain a number of such sections bound together side by side, are introduced.

The process of binding a book from the time the sections are ready for sewing to the completion of the covering is referred to as “forwarding”.

ESSENTIAL CONSTRUCTIVE POINTS

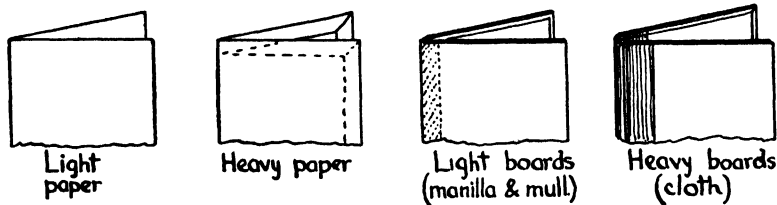
Designing, whether for book crafts or for any other craft, is more than the application of set rules. Skill and success in planning can come only from a sound knowledge of technique, gained by experience in making well-designed objects.

Nevertheless, certain essentials of construction can be classified with the reasonable certainty that they will apply to almost every type of article that may be planned, and the beginner may conveniently check his design by reference to a list of these essentials.

Their need arises from the nature of the materials used. Paper, cloth and cardboard may tear or crack, fray or wear, curl or bend unduly in use, shrink or swell when manipulated, or appear unsightly when wrongly mounted. Adhesives may give way if the materials they join are not properly arranged.

To guard against each of these possibilities is the first duty of the designer. The following list shows the ways in which these problems are generally tackled:

- 1 *Tearing or cracking* may occur at hinges or folds, at exposed edges, or at holes made for sewing or lacing.



4

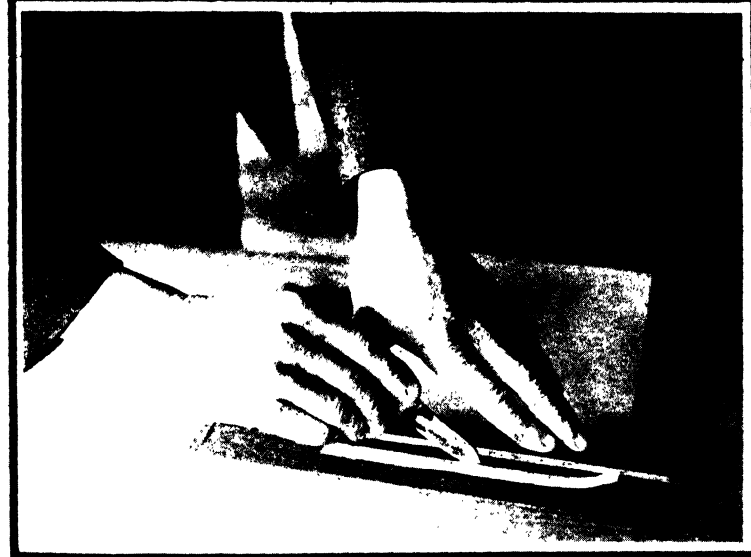
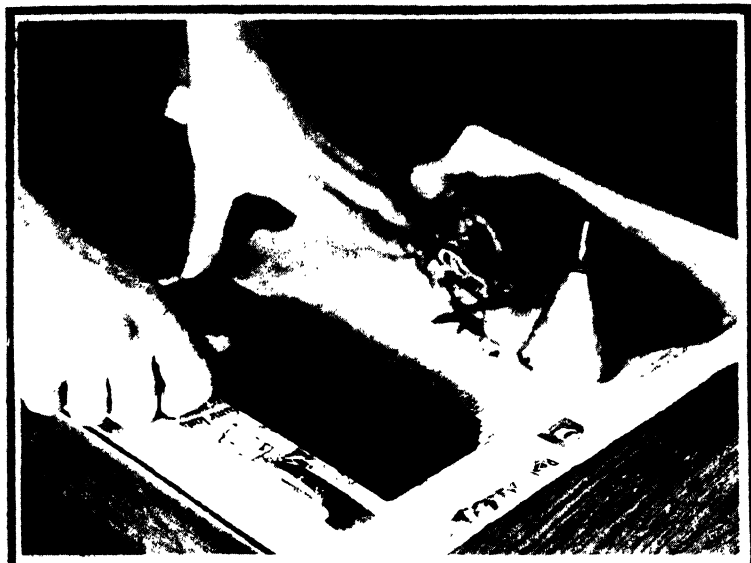
Hinges. Only the very lightest articles, such as Christmas cards, programmes, etc., should have hinges of any paper but manilla. Early exercises, or light temporary folders, may have manilla hinges or folds to act as hinges if the rest of the article is made of manilla paper. Board sides should generally be hinged with cloth. If manilla is ever used in early exercises as a hinge for boards it should be reinforced by mull.

The ends of hinges to stand much wear should be turned in. Only in very elementary work should the unturned edge of cloth be allowed at the end of a hinge.

Pages and end-papers are light, and their hinges are protected, consequently they generally have no need of reinforcement. The principal types of hinges in use are shown in 4.

Edges: Any edge, such as that at the end of a hinge, or that

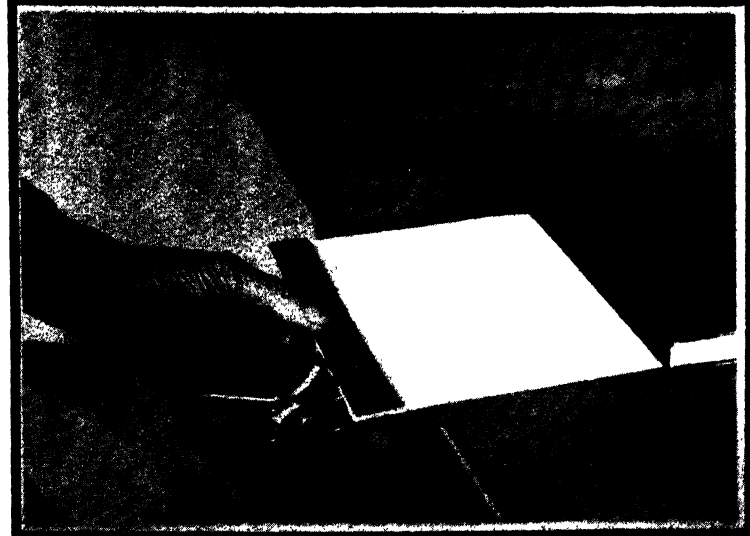
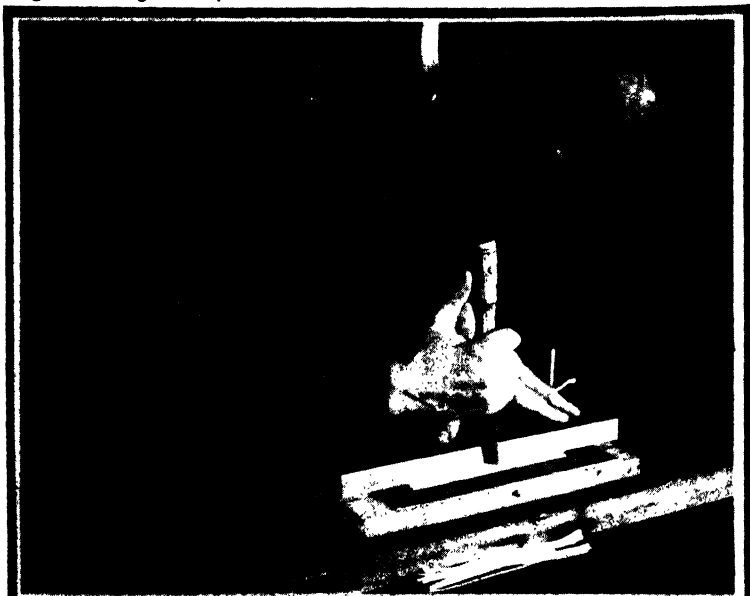
Sharpening the knife



Trimming with knife and straight-edge

PLATE II

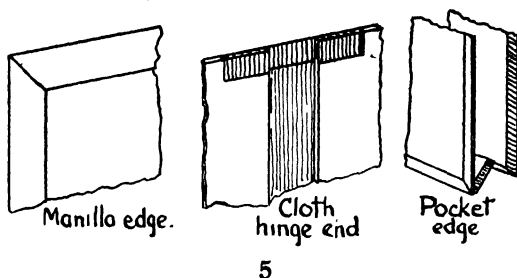
Edge trimming in the press



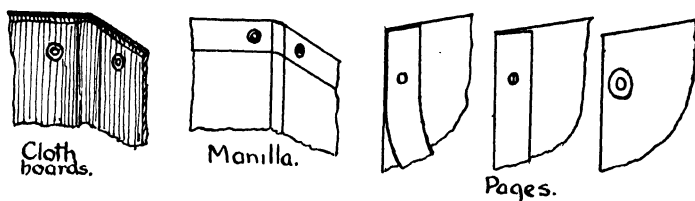
Use of punch pliers and punching gauge

PLATE III

of a pocket, should be strengthened by doubling it over and pasting down (5).

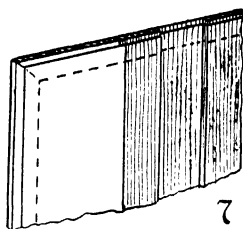


Holes, wherever they are to have much wear or strain, should be strengthened with eyelets, if in a thick material. If eyelets are inserted in cloth or paper alone the material must be thickened by doubling, or the eyelet may drag out. Pages cannot generally be eyeletted; if extra strength is required at perforations the pages may be double at those points, either by pasting a strip of paper on, by doubling over the page itself, or by adding a circular "reinforcement" (6). Holes for sewing do not need reinforcing as



pages sewn are usually light; but a single fold should not be sewn through or the paper may tear. Thus in sewn endpapers the sewing is always done through a double leaf (3c, p. 196).

- 2 *Wearing or fraying.* Strawboard and millboard are both unsightly; strawboard in addition wears very badly; so boards should always be completely covered. The edges of covering paper or cloth are always taken over the edge of the board to be covered; the inner lining stops short of the edge by about $\frac{1}{8}$ " (7). The edge of cloth is liable to fray; the adjacent covering paper is therefore lapped over it.

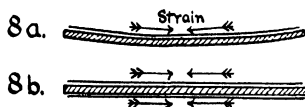


- 3 *Curling or bending.* Material must be chosen for covers, etc., which will be stiff enough to stand use. If boards are used they must be covered; construction papers may be stiffened, especially in early exercises, by turning in and pasting down a broad strip of the edge.

The hollow cloth back of a book will be shapeless unless the cloth is stiffened with a liner of paper.

Eyelet holes for lacing which is to stand much strain, as in magazine loose reading covers, should not be placed in the cloth back, or they will cause it to be dragged out of shape. The cover should therefore be designed with the eyelets in the boards or in a stiffener of cardboard. (Exercises 5 and 7, Chapter 13; Exercise 6, Chapter 15.)

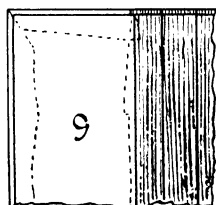
- 4 *Shrinking or swelling.* This occurs more or less in all materials which are pasted or glued. Paper and cloth absorb moisture from the adhesive, and expand; when they dry they correspondingly contract. If in the meantime they have been made to adhere to a board the contraction will cause them to pull the board into a curve (8a).



This tendency, which no amount of pressing will permanently eradicate, is counteracted by putting a lining on the other side of the board, which exerts an equal pull in the opposite direction (8b). Thus boards should always be covered on both sides. Absorbent paper expands more than smooth or hard paper when damped, and than cloth; consequently it shrinks more when dry and exerts the stronger pull. The designer should aim at selecting his cover and lining so as to give equal pulls: sometimes a board must be

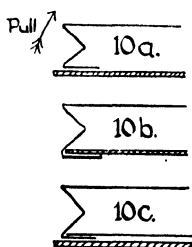
doubly lined on one side to keep it flat against the pull of a specially thick or absorbent material on the other. Only experience will tell him how to do this with certainty.

- 5 *Unightly appearance due to wrong mounting.* Paper and cloth, being thin, show inequalities of the surface over which they are pasted. Linings, therefore, will show by their uneven surface if the edges turned over beneath them have not been



cut parallel (9). Cloth on the back of a book will conform to the irregularities of the tapes and gluing, and be unsightly, unless these irregularities are first built up with paper to form a smooth surface. (Exercise 8, Chapter 13.)

- 6 *Failure of adhesive to hold.* This applies especially to the fixing of pockets. A pocket, which has to stand a good deal of strain, should never be fixed down merely by its flanges, as 10a, or the pull will drag the pocket away from the board. If possible, the flange should be brought *below* the board (10b);



if, however, it is necessary to mount the pocket only on the inside of the board, it should be built up with the flanges brought below a stout lining (10c), the lining then being well fixed down to the board. The pasted surface of the lining is large, and will hold better than the narrow pasted surface of the flange.

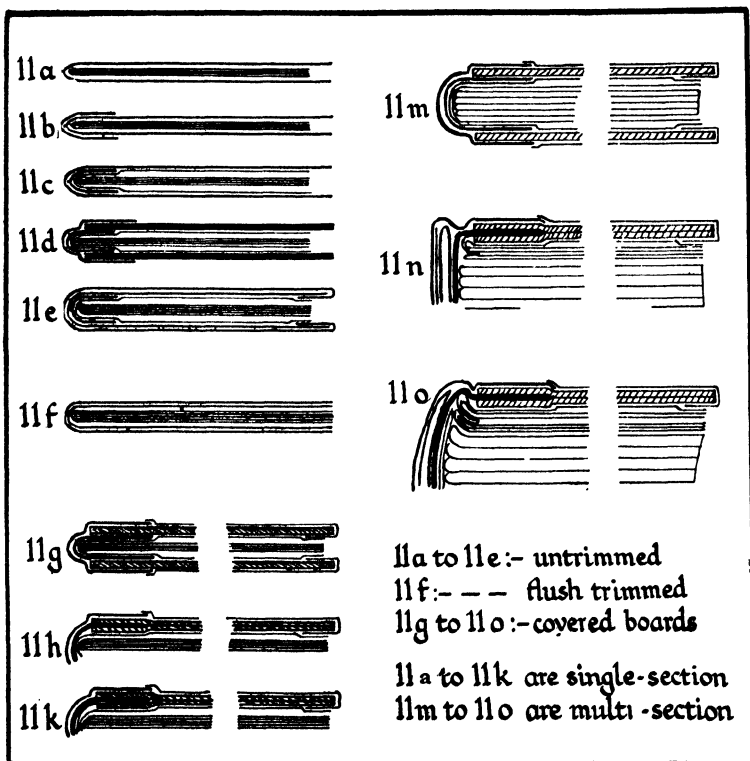
It is hardly necessary to say that no surface to which adhesive has been applied should ever be left exposed in a well-designed article.

BOOK CRAFTS FOR SCHOOLS

SECTIONED BOOKS

Some further general considerations for the designer may be derived from a study of the various types of sectioned and single-sheet bindings which are suitable for a book crafts course.

In 11 are shown in section a number of types of single-section "bindings", followed by such simple multi-section bindings as may be included in a course such as that given here. They are arranged *approximately* in order of difficulty, but any of the



types, however simple, may be made the basis of an exercise at a more advanced stage. Other minor variations of type could easily be suggested and placed in between those given at various stages.

Types "a" to "e" do not involve either edge trimming or the covering of boards. "a" is the simplest "book" sewn to a paper cover; the cover projects beyond the pages to conceal the irregularity of the untrimmed edges. "b" is a similar book, with a

DESIGN IN BOOK CRAFTS

cloth strip pasted over the sewing, strengthening the hinge. "c" has the pages sewn to the end leaf, which is mulled, the paper cover being put round afterwards. "d" is similar, but has uncovered boards of tinted board, and a cloth back. "e" is also similar to "c", but the cover, which is completed before putting it on the book, is of manilla paper covered in full cloth with edges turned in.

"f" may be taken as typical of any of the foregoing, but with the edges and cover trimmed flush. We have thus already ten distinct types of single-section binding, five with untrimmed edges and five with trimmed edges, before coming to the use of covered boards and of special end-papers.

"g" to "k" are three types of more permanent single-section bindings, with covered boards, which may be carried out either in quarter, half or whole cloth, or in quarter or half leather, in the book crafts course. "g" has covered boards, cloth back, with coloured end-papers passed right round the book, and with a mulled waste end-paper cut to form the hinge. "h" is similar, but is bound in split boards. "k" is again similar to "h", but is sewn to tapes.

"m" is the first type of multi-section book in the course. It consists of not more than four light sections, which are "pamphlet-sewn", or sewn "section on section" without tapes. It is afterwards completed with end-papers as "g", mulled and bound as a single-section book.

"n" and "o" are the only two types of heavy multi-section bookbinding considered suitable for the book crafts course. "n" has several sections sewn on tapes, together with zig-zag end-papers. It has split boards, and is covered with the back left square. "o" is a re-covering of a book of which the original sewing, rounding and backing are intact and in good condition. It is sewn to extra tapes, and forwarded exactly as "n". A properly rounded and backed book, sewn on tapes, with split boards and hollow back, is exactly the same as "o" except for the extra tapes. It is the form of binding to which the book crafts course should ultimately lead.

SINGLE-SHEET BINDINGS

Binding devices for single sheets. In 12 is shown a corresponding succession of single-sheet bindings. These cannot all be strictly termed "loose-leaf" books in the sense that the leaves can easily

be removed, added to or changed in use. Jointed rings are by far the most convenient fittings for quick and easy changing of leaves, but they have the disadvantage that they project at the back of the book so that it cannot easily be packed or stacked with other books. Loose short laces or tags may be used for exercise books and files where frequent changing of a few light pages is needed; "Tower" Binders are not very sightly, and are fit only for storage files where additions to the pages are more frequent than rearrangements. Paper fasteners can be used for small tear-off pads, but do not lend themselves to changing the leaves.

Lacing is an excellent method of binding fairly heavy albums, etc., and lends itself to the addition of "stubs", *i.e.* thickening pieces at the back of the leaves to make up the thickness of the back of an album that is to have cuttings or pictures stored between its pages. Lacing, however, if done tightly enough to hold the book together, makes a book that will not open well unless the pages are large, or at least unless the distance from back to fore-edge is great. It is therefore most suitable for books longer than they are high, and on these it may be made a decorative feature.

Screw binders are very strong, but not very convenient for any but occasional changing of the pages. They should not be used on a book that is likely to vary much in thickness; they are very suitable for such things as stamp albums, where the sum of the used and the spare pages is constant, the binders being removed only when the pages are rearranged. Screw binders tend to mar the appearance of a book, and to scratch other books placed beside it on the shelves; they should therefore be used in books with inside hinging pieces, so that the binders are concealed. An exception to this is the gramophone record album, where the screw binders are used for strength only, and where they appear insignificant on the outside of so large an article, which, moreover, is hardly to be considered a "book", and may therefore be permitted to have the screws showing.

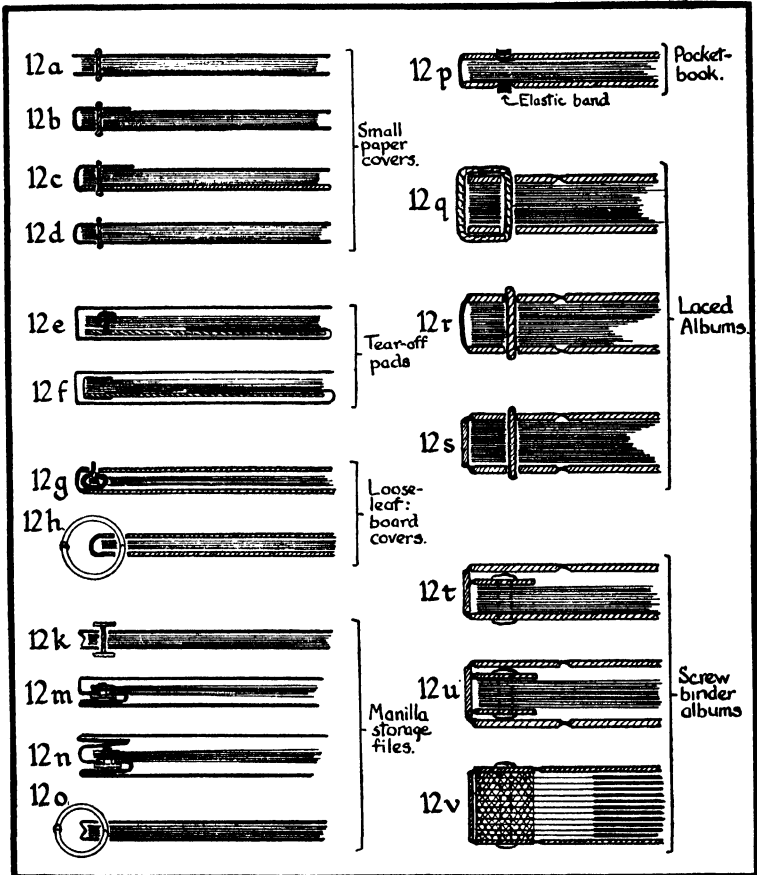
Any other single-sheet binding devices should be judged by the following desiderata, and unless they satisfy most of them should not be used:

- 1 Do they lend themselves to the easy addition, removal and changing of pages?
- 2 Do they produce a book that will open easily?
- 3 Can they be easily fixed?

DESIGN IN BOOK CRAFTS

- 4 Do they project beyond the sides of the book? If so, are they of a type to injure adjacent books on the shelves?
- 5 Are they cheap and easily obtainable?

Single-sheet binding types. Of the types in 12, "a" to "d" are very simple laced paper-covered bindings, suitable for memorandum



pads, shopping lists, etc., of a light and impermanent character, such as will be made in the early stages of the course. They are not intended to have the pages changed or replaced. "e" and "f" are types of card-backed tear-off pads, intended to be slipped into pockets provided in their covers. "e" is bound with

paper fasteners. "f" is a pasted pad as in Exercise 7, Chapter 9.

"g" and "h" are really "loose-leaf" books, suitable for exercise books. "g" has a special type of loose and easily changed lacing, made to allow the pages to open flat, as in Exercise 9, p. 123. "h" uses jointed rings.

"k" to "o" are manilla storage files or folders, suitable for use with the foregoing exercise books or for the storage of documents where lightness, cheapness and temporary efficiency are preferred to great strength, permanency and good appearance. "k" uses tags or short loose laces; "m" and "n" use "Tower" Binders, and "o" rings. The last are too costly to be used widely for such purposes.

"p" is a very simple form of "binding" suitable only for small books, but cheap and convenient; specially adaptable to pocket note-books. An elastic band is used to hold the leaves together, as in Exercise 9, p. 152.

"q" to "s" are laced albums bound in covered boards with cloth hinges. "q" is the simplest: it has an open back and lacing passing round it; only the front board is hinged. "r" has double hinges and a closed cloth back. "s" is similar, but has a square cardboard back. These three types are specially suitable for albums with stubs.

"t" and "u" are books bound with screw binders, the first with a single hinged cover, and with the binders showing on the back of the book, most suitable for a desk record of some kind used with the hinge at the top of the book: the second with double hinges and the binders entirely concealed when the book is closed; suitable for albums.

"v" shows the use of screw binders to strengthen the back of an album with pockets which are fixed to cardboard stubs, such as a gramophone-record album.

THE PLANNING OF SCHEMES OF WORK

The planning of a scheme of work in book crafts is first a matter of designing, at least in their essentials, the types of exercises to be worked by the pupils, and second, the arranging of these exercises in their proper sequence, to suit the abilities of pupils of various ages.

A teacher who has not had some experience of the actual technique of book crafts, and also of the difficulties likely to be

encountered in guiding a class of pupils through a given exercise, can hardly be expected to make a satisfactory "job" of a four- or five-years' course by sitting down and forecasting the stages through which the pupils will pass. To such teachers I would offer the advice that they should be content to begin in a small way, planning out as far as they are able the work for a term or so, and having in mind the developments which they hope that the course will subsequently take. By the time a few months' work has been done, the teacher will have much more knowledge and confidence with which to prepare his plans for a longer period.

In the middle part of this chapter I have endeavoured to summarise certain general essentials; this summary will be best understood by those who have attempted some at least of the technique of the crafts. With its use it should be possible to devise suitable "type" exercises for various stages of the course, to fulfil the demands of sound design which are set forth in the first part of the chapter.

To arrange these exercises in order of difficulty, given some knowledge of technique, may be a comparatively simple matter, but the teacher should have other considerations in mind as well as the order of difficulty, though of course this is the most important. As far as possible he should endeavour to arrange the exercises so that in every stage the pupil meets typical examples of the principal book crafts constructions.

In addition to single- and multi-section bindings and single-sheet bindings, the sequence of which has been indicated, the types may be classified as Envelopes and Portfolios; Loose Reading Cases; Mounting and Calendar types, and Christmas Cards. With the exception of the tie-on tags in Chapter 7, every one of the articles in the course here suggested may be included under one of the above headings, or as a combination of two, *e.g.* a pocket-book with pockets may be regarded as a combination of a loose reading case with some exercises of the envelope or pocket type.

At each stage the teacher should endeavour to include some example of each type. If this is done, and a series of well-designed exercises arranged in order of difficulty, the pupil will not only progress steadily towards higher technical standards, but will also be continually facing new types of problems, or meeting the old problems in more difficult forms. Whatever be the precise arrangement of the scheme of work, it should have as

BOOK CRAFTS FOR SCHOOLS

its immediate aim the training of pupils who can tackle their problems with the confidence and accuracy derived from skill and experience, whether these problems be presented to them in familiar or unfamiliar form.

If the scheme succeeds in achieving this immediate aim, its ultimate aim, which is educative, cannot fail to be reached.

CHAPTER 4

Essentials of Constructive Technique:

(1) Measuring and Setting-Out; Folding

MEASURING AND SETTING-OUT—Pencil—Ruler—Transferring measurements—Right angles and rectangles—Set-square—Substitute for set-square—Setting out the rectangle—Templates—Setting-out on squared sheets by folding—Finding the centre of an edge by folding—Setting-out mitred corners—Use of set-square for mitres—Setting-out mitres by folding—Setting-out oblique mitres—FOLDING—Folder—Folding folio, quarto, octavo, etc.—Folding into three parts—Creasing and turning-up measured folds—Creasing long folds.

MEASURING AND SETTING-OUT

Careful and accurate measurement and “setting-out”, *i.e.* the preliminary marking of shapes and sizes on the materials, are essential to the success of all later work.

Pencil. The pencil is the only marking “tool” generally needed in simple book crafts, and it must be kept sharp. Pupils should be trained from the first to mark *fine* points and lines.

Ruler. No measurements smaller than one quarter of an inch need be used in the earliest stages; later on the eighth may be introduced. Only when the pupils have become thoroughly accustomed to working with these, say at the age of ten years, need the sixteenth come into general use, and it will rarely, if ever, be necessary to use a smaller ruler subdivision than this.



1

Small pupils who are just growing used to simple measurements are apt to be puzzled by rulers marked with a variety of tiny and unfamiliar subdivisions, and it is therefore desirable that their rulers should contain only those subdivisions needed for the work in hand, and these *all along* the ruler's edge. In 1 is shown a ruler suitable for junior work; one for seniors should have sixteenths all along one edge. It may be used also as a straight-edge for folding (*not* for cutting), and should be substantially made.

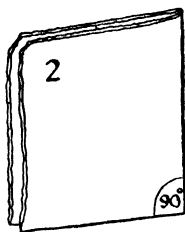
When it is necessary to mark the same measurement several times over, *e.g.* in marking the width of flaps or the position for cover papers, it is convenient, and often more accurate than using the ruler, to transfer it by means of a strip of paper

marked to the length required. Many strips of paper and thin card will accumulate during a book crafts course; it is a wise practice to keep a stock of the stiffest of these for such uses.

Practically all sheet materials for book crafts are supplied in rectangular shapes, either flat or rolled, and the rectangle is by far the commonest shape needed in constructive work. It is therefore of the greatest importance to use correct methods for its construction and for the setting up of right angles.

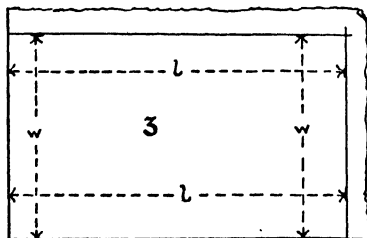
Set-square. For this purpose a pattern right angle, *i.e.* a "set-square" of some kind, must be used. A 5" or 6" 45° set-square is the most useful pattern, and will later be required for setting-out mitred corners.

A piece of stiff paper can be folded once to form a straight-edge, and again to form a right angle (2). With a dab of paste



between the folds, and dried under pressure, this folded paper makes an excellent substitute for the more costly set-square, and can easily be replaced when worn out.

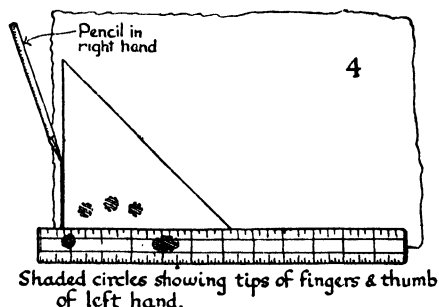
Given two of its edges accurately at right angles, the rest of the rectangle can be quickly set out. If the material, whether paper or card, has one corner accurately cut "square", *i.e.* cut to a right angle, the desired rectangle is set out merely by measuring



from the cut edges and drawing parallels to these (3). It is a good plan to mark the right angle from which one is working, of course on the wrong side of paper or cloth.

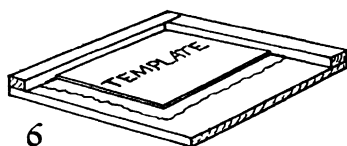
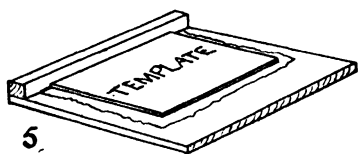
ESSENTIALS OF CONSTRUCTIVE TECHNIQUE

If one edge only of the material is straight, place the ruler or straight-edge tight up against it and, standing the set-square on it, mark the upright. The rest of the rectangle is completed by measuring as before.



If, however, no edge of the sheet is sufficiently accurate to work from, the first essential is to mark one edge straight. Keeping the ruler exactly on this line, the upright is set out, using the set-square as before, and the rectangle then completed by measuring from the two lines so drawn (4).

Templates. The foregoing methods of setting-out must be so thoroughly mastered by the pupils as to become habitual as



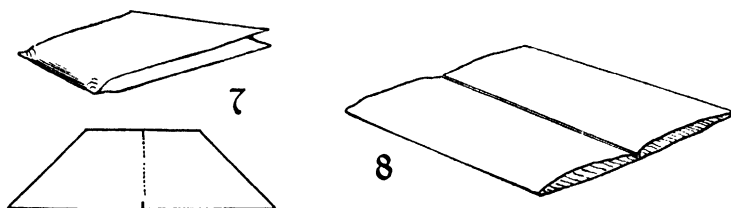
early as possible in the course, but for the youngest and the more backward ones they will be too difficult. In the early stages of the work such pupils may use templates, *i.e.* pattern rectangles supplied by the teacher, to mark out their shapes.

Even with these the method of working from one edge should be followed wherever possible, setting the ruler against the edge of the sheet, and standing the template upon it as with the set-square.

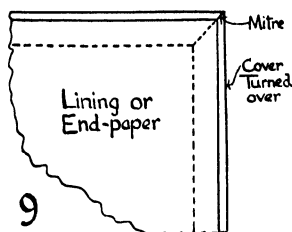
Templates will sometimes be found useful by the more advanced worker, where a number of pieces have to be marked to the same size. For this it is convenient to cut one edge of each piece straight, and to work on a board with a fixed straight-edge (5). One or two of these boards are very handy for the

occasional use of a class. If the board has a second ledge upon it, fixed at right angles to the first, pieces with one "square" corner, such as folio or quarto sheets, can be marked still more accurately and quickly, as shown in 6. The table of the card cutter, with the knife thrown back out of the way, can be used similarly.

A fact that is not realised as often as it should be in book crafts courses is that much setting-out on rectangular sheets which have afterwards to be folded or cut, such as in envelope making, can be done accurately by folding the sheet, using the minimum of ruler measurements and involving no set-square work at all. This is exemplified in the envelope making exercises on pp. 87 and 114, where full details are given, but besides its use in these exercises it should be regarded as a legitimate method to be adopted whenever suitable. As a general rule, it may be taken that the folding method is to be preferred as being less liable to error than the setting-out with ruler and set-square of complicated "developments".



A particular example of this is the rapid finding of the centre of an edge of paper or cloth, *e.g.* a cloth corner piece. To do this by measurement is slow and liable to error. Fold the piece end to end without pressing the fold except just at the ends. A fold all across may not be needed and may deface the finished



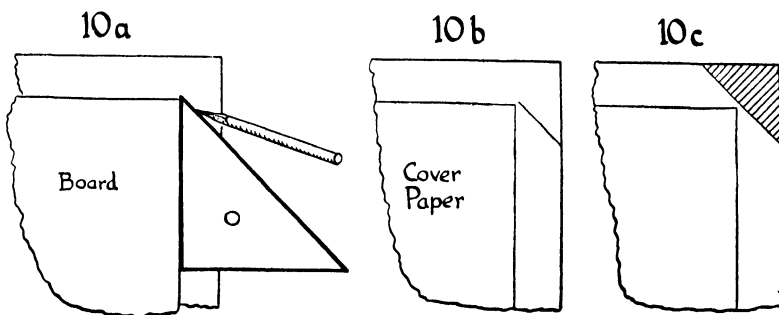
work. The piece is then opened out and the centre marked with pencil at the ends of the fold (7). An edge may be divided into four equal parts by a similar process (8).

ESSENTIALS OF CONSTRUCTIVE TECHNIQUE

Setting-out mitres. Wherever cover paper or cloth is turned over at the corner of a board it is customary to "mitre" the joint on the inner side, *i.e.* to make the side and end turnovers meet at an angle of 45° (9). One of the ready tests by which to judge the quality of finished work is by the accuracy of its mitres. Thus the setting out of mitres is of first importance.

As soon as the pupils are able to use the 45° set-square with confidence, it should be used for mitres as follows:

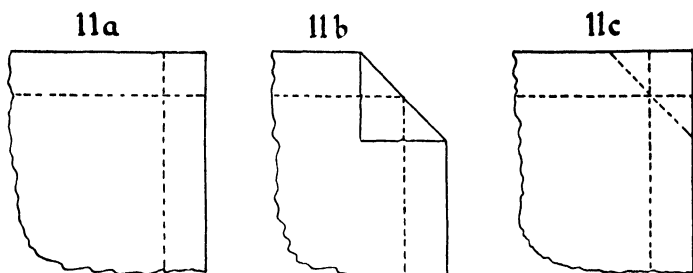
After the board has been placed on the cover paper in its final position, and lines have been lightly drawn round it, the



set-square is put against the corner as shown (10a) and a line drawn on the paper against its slanting edge. This line should be outside the corner of the board, being set away by a distance approximately equal to the thickness of the card to be covered. When card and set-square are removed, the paper will appear as 10b. The slanting line is then produced right across the corner as in 10c, the shaded triangle of paper being subsequently cut off. The actual manipulation of the corner in covering is dealt with on p. 69.

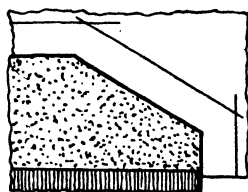
The set-square method will be found too difficult for the youngest pupils, but as they will work only with thin boards and wide turnovers the following method may be substituted:

The board to be covered having been placed in position on the cover paper, the two edges are successively folded over it. When opened out and the board removed, the paper appears creased as in 11a. The corner of the paper is then folded in as 11b, so that the creases on the turnover align with those running the length and breadth of the paper. When again opened out the paper appears creased as 11c, when the corner may be cut off just outside the slanting crease.

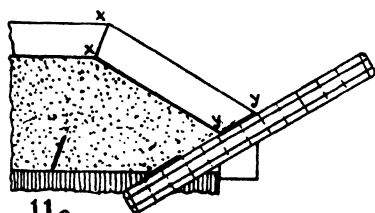


Setting-out oblique mitres. It is sometimes necessary to set out mitres on covering materials at corners which are not right-angles, *e.g.* at the outer corners of the board flaps of the portfolio in Exercise 5, Fifth Stage (p. 200). The following method will ensure accuracy in such mitres:

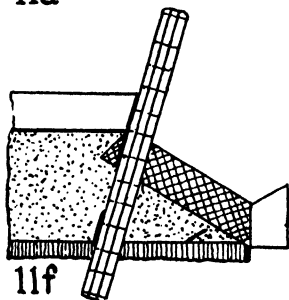
The board, with its oblique corners cut to shape, is laid upon the wrong side of the covering paper or cloth, a line drawn round it, and a suitable width for the turn-over set out (11d). The covering material having then been cut to shape, the board is replaced in position, a ruler placed across the mitres, and marks made on cover and board as shown in 11e. The material is then cut along *xx* and *yy*, the board again replaced and one flap folded over into position. The ruler is



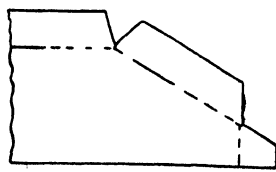
11d



11e

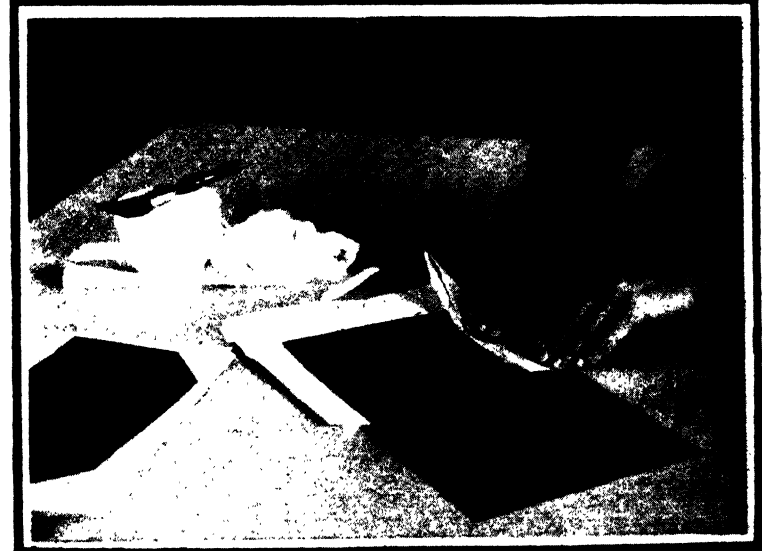
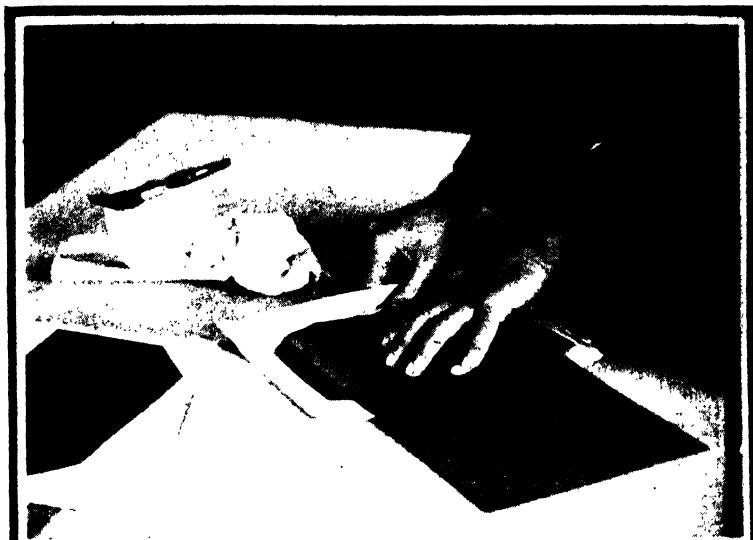


11f



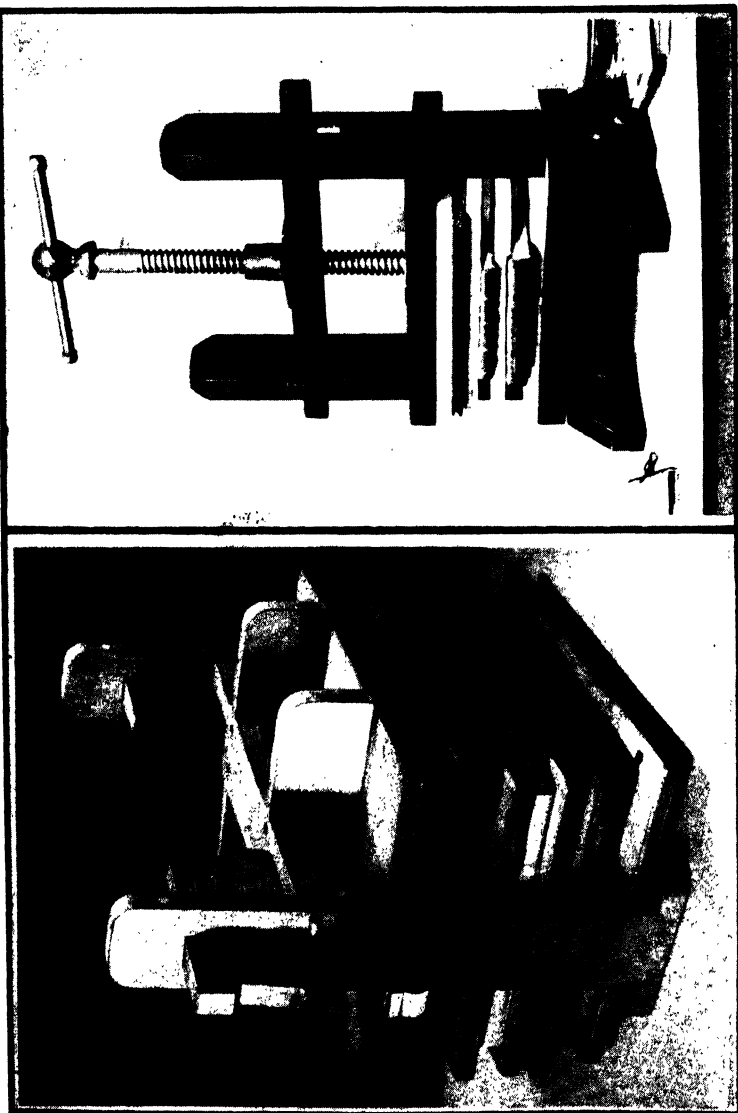
11g

Covering: Turning in the edges



Covering: Rubbing down

PLATE IV



School-made Standing Presses: Wedge standing press · Screw standing press

PLATE V

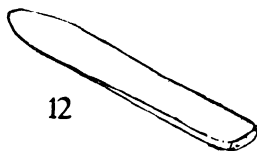
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again laid on the mitre, using the corner of the board and the pencil mark previously made to ensure correct alignment. The turn-over is then marked (11f). This is repeated with each of the flaps, after which the wedge-shaped waste pieces between the mitre lines are cut away. The final shape of the cover is shown in (11g). An allowance at each cut edge should be made for a *slight* overlap of the mitred edges. When the flaps are finally brought over in covering, the mitre will be seen accurately to bisect the angle of the corner, as it should.

FOLDING

As has been stated in Chapter 3, as far as possible all book crafts exercises should be designed so as to utilise halves, quarters, eighths and other simple subdivisions of the sheets in which the materials are usually supplied. Where the material is thin enough, these subdivisions are obtained by folding.

Folder. Folding is a simple process, and needs only one tool—a bone folder which should be about $4\frac{1}{2}$ " long, with a blunt pointed end (12). If there is the slightest roughness or sharpness on the edge, it should be rubbed down with glasspaper.



When working with thin material this tool is used to run over the folds to press them together after they have been flattened by the fingers. The folder has many other uses, as will be seen later, and should always be at hand.

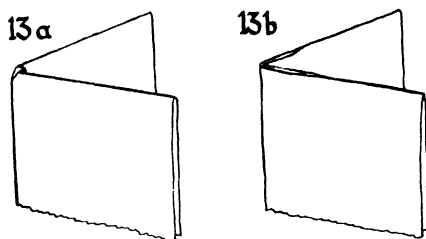
In folding sheets folio, quarto, octavo, etc., it is usual to make the fold along the shorter dimension of the rectangle, *e.g.* a $30'' \times 20''$ sheet is first folded to $20'' \times 15''$, then to $15'' \times 10''$, then to $10'' \times 7\frac{1}{2}''$, but to obtain other shapes it may occasionally be necessary to make one or more folds along the length of the rectangle.

Folding is usually done in the following order:

- Right half over to left; (Folio)
- Top over to bottom; (Quarto)
- Left half over to right. (Octavo)

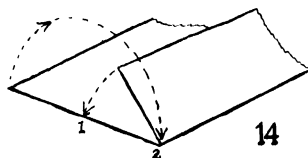
This order must be followed when folding the printed sheets

of a book, but for plain sheets it need not be strictly adhered to. One caution is necessary: do not attempt to make too many folds without dividing the sheet. As a rule, a large sheet to be folded 16mo is best divided into two and each half separately folded 8vo. Any paper, unless very thin, when folded quarto



will tend to buckle at the corner where four folds meet (13a). To prevent this the folder should be put inside the last fold and the buckling pressed out; or if the paper is thick, or in 8vo folding, the sheets may be slit with the point of the folder or a knife at the double fold (13b).

Sometimes it may be necessary to fold a sheet into three equal parts. The best way to do this is to take a strip of paper the same length as the edge to be folded. Experiment with this until it is accurately folded into three. Then use it to mark the edge



of the sheet (14). Bring the right-hand edge of the sheet to mark 1, and the left-hand edge to the first fold, which is at mark 2.

Very frequently, folds such as those for flaps have to be made which are not in the centre of the sheet, and which cannot therefore be made by the direct folding method. Moreover, many thick materials, such as manilla and stout cover papers, will not make neat and sharp folds unless they are first creased.

To do this the *inside* of the fold is first marked by running the point of the folder along the straight-edge or ruler. Then, keeping the straight-edge in position, place the point of the folder under the flap, *i.e.* *outside* the fold, and again run it along

the straight-edge (Plate Ia and b). Then remove straight-edge, turn the flap right over and press down with folder as usual.

Sometimes, as in making large work envelopes, a fold will be too long for the 12" straight-edge. In this case one end of the fold should be creased *and* turned up, as this will help in aligning the straight-edge for the other end of the fold. It is useful to have a few straight wooden laths, about 20" long, available in the book crafts room for use as straight-edges when turning long folds. These must not be used for cutting or their straightness will soon be spoiled.

CHAPTER 5

Essentials of Constructive Technique:

(2) Cutting and Edge Trimming; Piercing, Punching and Eyeletting

CUTTING OUT MATERIALS: STOCK SHEETS—Cutting up stock sheets—Shears—Card cutter—TRIMMING TO SIZE—Scissors—Knife—Oilstone—Sharpening the knife—Straight-edge—Cutting board—Knife trimming: paper or cloth—Knife trimming: cardboard—Edge trimming of a pad or book—Simple trimming press—Use of trimming press—PIERCING AND PUNCHING—Piercing—Awls—Use of the awl—Punching—Hollow-punch pliers—Combined punch and eyelet closer—Use of punch pliers—Marking for punching—Use of punching gauge—Saddler's punch—Punching for screw binders—EYELETING—Eyelets—Fixing eyelets—Fixing eyelets with single eyelet punch—PRESS STUDS—Fixing press studs.

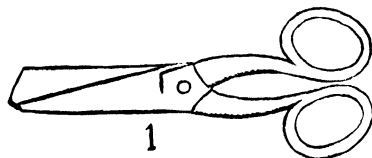
CUTTING OUT MATERIALS: STOCK SHEETS

Except in the earliest stages of classwork, when beginners may be given pieces of paper or card cut to their final sizes, it will always be necessary first to cut the stock sheets of material to *approximate* size, *i.e.* a little larger than the finished size. The final task of the worker, and usually the only task of the individual pupil, in cutting out his material is, after setting out the shape, to *trim* it to its required size.

It cannot be too strongly emphasised that any general attempt to cut material to its final size direct from the stock sheets will lead to endless trouble and inaccuracy in the case of boards, and to much waste and spoiling in the case of paper or cloth.

Stock sheets of paper are divided by folding and slitting; a large table knife is useful for this.

Cloth is cut from the roll with scissors, or by folding and slitting, taking care to cut all pieces so that the weave of the cloth runs straight across or along the rectangle to be cut, and not diagonally.



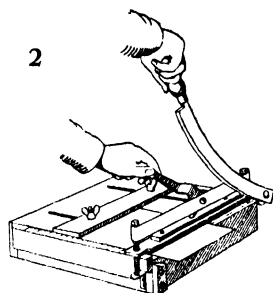
Shears. A pair of 10" bookbinder's shears (1) is best for cutting up stock sheets of card. If the sheets are cut into strips not more than 12" wide they can be further divided very quickly by cutting them across with a card cutter (2).

Card cutter. One of these is a most useful adjunct to any book crafts class. Larger card cutters than the one shown are very

ESSENTIALS OF CONSTRUCTIVE TECHNIQUE

heavy and expensive; this type is substantial enough to cut single sheets of strawboard up to 32 oz., millboard up to 8dX, or a wad of six or eight sheets of manilla paper.

For beginners it may be used to prepare sheets to exact size. If the cutter has no safety device, as has the one shown, it is

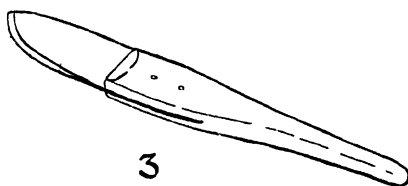


desirable when cutting a wad of paper to hold the top sheet down with a strip of card, otherwise it may ride up or slip and be cut badly. This tool should be operated only by the teacher or by reliable senior pupils.

TRIMMING TO SIZE

Scissors. In the first stage, or, say, with pupils up to the age of ten years, it is generally unwise to attempt to use a knife for trimming; consequently the materials should be chosen from those which can be cut with scissors. Strawboard up to 12 oz. can be cut in this way.

For very young children $4\frac{1}{2}$ " round-ended scissors are perhaps safest, but the 6" Sheffield pattern, with pointed blades, is a more generally useful and reliable tool, the longer blade enabling more accurate cutting to be done. If the teacher is concerned about the possible danger of the sharp points, these may quickly and easily be blunted upon a grindstone. Any tool shop will do this work very cheaply.

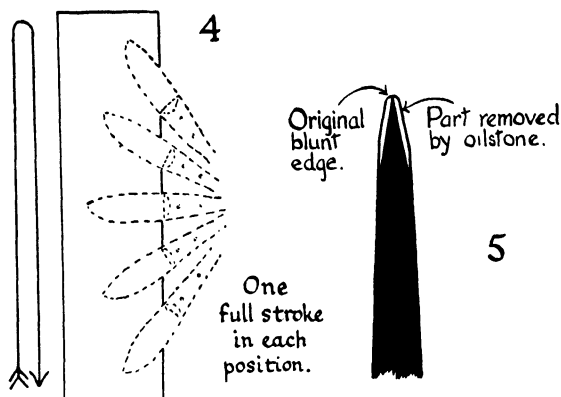


Knife. As soon as the pupils are capable of handling it effectively, the knife should be the instrument used for all straight

trimming. The "Leipsic" pattern of cardboard knife (3) is most suitable for general work, its rounded blade being preferable to the straight blade of the "London" pattern.

It is absolutely essential that it be kept sharp, and an oilstone must be available during every book crafts lesson when knives are being used. It is an absurd though frequent error to expect to succeed in knife trimming without adequate sharpening of the cutting edge.

Oilstone. A "Washita" Oilstone, $8" \times 2" \times 1"$, in a wooden case, will answer the purpose. Light lubricating oil or olive oil should be used, the kind sold in small tins for cycle lubrication



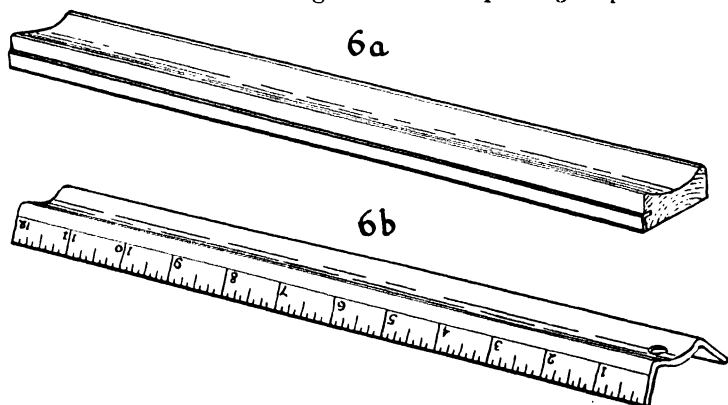
(not for lighting) being excellent. Paraffin is useless except for occasional cleaning of the stone; linseed oil is fatal to its sharpening properties. The oil should be kept in a small bench oiler. Always wipe the stone clean before putting it away.

The method of sharpening the knife is shown in Plate IIa. First put a few drops of oil on the stone. Place the knife-blade flat on the stone, and then raise it until the edge just touches the surface of the stone. Now rub the knife edge steadily and slowly to and fro the whole length of the stone. The art of sharpening lies in keeping the blade at the same angle with the stone throughout each stroke. Since the edge to be sharpened is curved, the knife must be gradually swung round into the successive positions shown in 4, making at least one full stroke in each position. A common fault with novices is to make hurried, short and careless strokes; the whole operation, to be successful, must be done carefully and deliberately, and, until considerable skill is gained, *slowly*.

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When one side of the blade is finished (which may be judged by wiping it clean on a rag and inspecting it closely to see whether the new bevel goes right to the edge) it is turned over and the process repeated on the other side. A much enlarged section of the sharpened edge is shown in 5. Any burr or "wire edge" left after sharpening can be carefully wiped off on the rag.

Straight-edge. For pupils' work a straight-edge of the type shown in 6a is suitable. For larger work a 24" or 30" plain steel



straight-edge should be available for occasional use. The "Non-slip" type of straight-edge shown in 6b is very safe, but is less satisfactory than the other type for cutting thin papers as it does not hold them down at the extreme edge where cutting is taking place.

Cutting board. The essential feature of a board on which to cut is that it shall be flat, smooth, and shall not unduly blunt the knife.

Thick strawboard will be found best for this. Quarter sheets (*i.e.* 15" \times 12 $\frac{1}{2}$ ") of 32-oz. board form excellent cutting boards for pupils. Although they soon become scored, they are not hard on the knife, and are so cheap as to be worth fairly frequent renewal. The teacher or advanced worker using large sheets of material will find that a large piece of strawboard is excellent to cut upon.

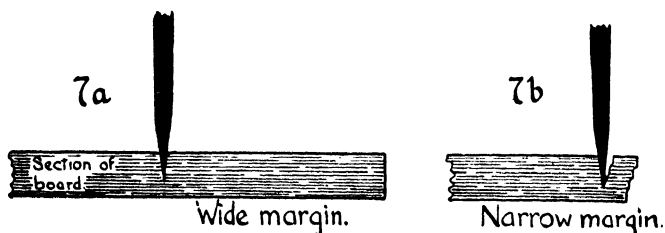
Millboard (thickness 8dX) will last longer than strawboard, but is more costly, as is also 3-ply wood, which is liable to give trouble owing to the edge of the knife getting into the grain of the wood.

Zinc cutting plates are satisfactory when new, but quickly blunt the knife; moreover, once they become scored they cannot successfully be reconditioned, and are costly to replace.

The method of using knife and straight-edge in trimming is shown in Plate IIb, which almost explains itself. It should be noted that the curve of the blade, and not the point, is generally used. This leads to cleaner cutting, as the point, if used continually, soon becomes blunt and will drag the paper.

It is necessary to explain in greater detail the trimming of cardboard, which appears to offer great difficulty to many book crafts workers. These difficulties will largely disappear if care is taken:

- (a) To keep the knife sharp.
- (b) To leave only a very small margin to be trimmed off. If a wide margin exists it should first be cut away with the shears to within about $\frac{1}{8}$ " of the line to be cut.

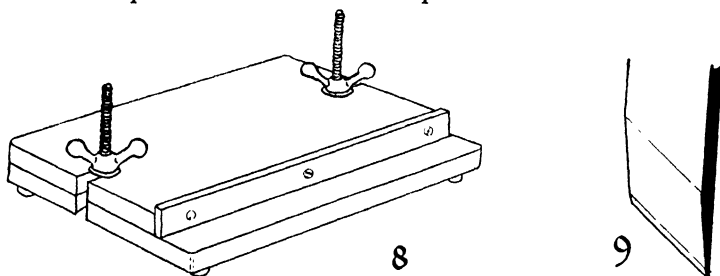


The reason for this second precaution is seen from 7. In (a) the margin is large, and the knife-edge, being wedge-shaped, merely gets tighter and tighter in the cut after each stroke. In (b) the margin is small, and as the knife enters the board the margin breaks away as shown; also it will curve away along the direction of the cut. Thus the knife is left free for the next stroke. A sharp knife will cut cleanly through 32-oz. strawboard with a few strokes if these simple rules are followed; most of the board used in the course will be much thinner than 32 oz. and the cutting is correspondingly easier.

It is possible to trim a few loose sheets together, or a very thin book, by the use of knife and straight-edge alone, as in Plate IIb, but for all but the thinnest pads or books some kind of press is desirable. The function of the press is two-fold: not only does it hold the straight-edge firmly in place during repeated strokes of the cutter, but it compresses the sheets to be cut and ensures that the trimmed edge shall be straight and "square".

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In bookbinding proper this work is done with a press and plough, but these are difficult as well as costly tools for young pupils, who experience trouble especially in adjusting the book in its exact position in the vertical press.



Simple trimming press. The press shown in 8 forms an excellent substitute for the press and plough for all simple book crafts work. As it is a horizontal press it is much easier to adjust the book in it ready for trimming than in a vertical press; and, if care is used in the cutting, books up to $\frac{3}{4}$ " thick or even more can be trimmed almost as well with it as with the more costly and complicated professional article.

Its use is shown in Plate IIIa. A carpenter's $\frac{3}{4}$ " firmer chisel, ground and sharpened with its edge at an angle of about 45° and with its back face perfectly flat and not bevelled (9), is the most efficient cutter, but for thin books or pads the knife may be used instead.

In using this press (which, incidentally, forms a handy nipping press when not otherwise required) a "cut-against", or piece of waste cardboard, should be placed below the book to protect the lower cheek of the press from the final cut.

When trimming a book which does not reach to the back of the press, it is well to insert there a pile of strips of cardboard, amounting to the same or a trifle more than the thickness of the book. By this means any tendency of the press when screwed down to tilt towards the back is prevented. If anything, the cardboard packing should cause a slight forward tilt of the upper cheek of the press, thus ensuring a close grip of the edges to be trimmed.

PIERCING AND PUNCHING

In many book crafts exercises it is necessary to make holes through a number of sheets of paper, through which a thread, cord, ring or other fixing device is to pass.

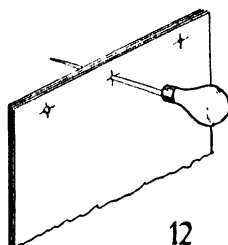
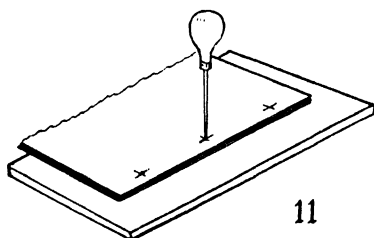
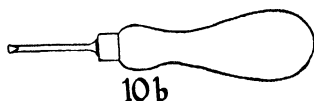
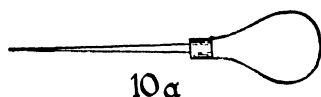
BOOK CRAFTS FOR SCHOOLS

Piercing, which is done with an awl, is liable to leave holes with ragged edges, and is only suitable for small holes.

Punching, on the other hand, cleanly cuts out a disc from the material, and is necessary for all work in which the cord or ring has to run freely.

Piercing will be found most useful in the early stages of the course. Beginners will need to pierce holes through which to pass the thread in sewing, or the cords which bind their simple "books".

Awls. For this purpose a bookbinder's awl (10a) is used. Some may object to the possible danger of its use by young children (though, after all, it is hardly more dangerous than



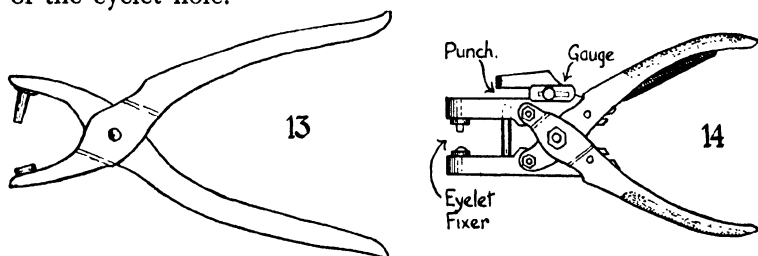
a needle), in which case a $\frac{1}{8}$ " carpenter's bradawl (10b) may be substituted. Three or four of either tool will suffice for the use of a class.

The first use of the awl should always be vertical, with a piece of wood or stout cardboard under the sheets to be pierced (11). As many of these boards as there are awls should be available for the class. After the top sheet has been marked for the position of the holes, the edges of the sheets are "squared up" against a straight-edge so that they are all in alignment. The awl should be driven in with a turning motion, far enough to pierce the lowest sheet, and then withdrawn. When this has been repeated with all the holes, the pad is carefully removed from the board and the awl passed again through each hole, working it about until the hole is the required size (12). The "burr" on the edges of the holes will help to hold the sheets together in place, and a pad which is being pierced should not be separated until the enlarging of all the holes is completed.

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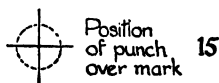
Punching. Most punching will be near the edges of sheets, in positions which can be reached by punch pliers. This is undoubtedly the best form of punch to use if possible.

Hollow-punch pliers. There are two types of punch pliers in common use. One has a tubular sharp-edged cutter (13), and is the kind often used for leatherwork. A variety of this is the "six-way" punch which has six interchangeable cutters of different sizes, but a single cutter 4 millimetres diameter will serve for most book crafts work. This type of punch pliers is less satisfactory, as a rule, than the second type described later. The cutters are apt to become blunt or damaged; the pliers do not possess a gauge for placing the holes, and, if used for eyeletting, an additional tool, or at least alternative nipples, are needed for eyelet closing, and care must be taken that these match the size of the eyelet hole.



Combined punch and eyelet closer. The second pattern (14) is a combined punch and eyelet tool. Though more costly than the former type, it is much more reliable, is easier to use, possesses a gauge by which the distance of the holes from the edge of the paper can be regulated, and provides an eyelet closer which is certain to match the punched hole.

Of the method of using punch pliers little need be said, except that young children may need the help of the stronger hand of the teacher or an older pupil, though I have found that children of eight can punch through 16-oz. strawboard with the second type of pliers described above. When punching through a pad of papers, do not attempt too many sheets at a time.

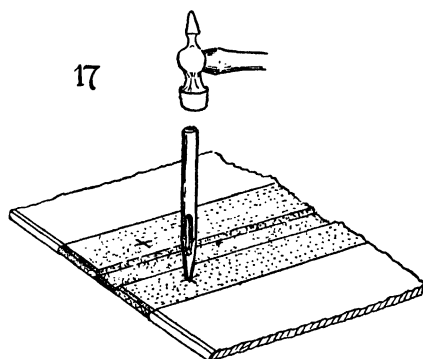


The main difficulty here is the placing of the holes. Marks for holes should be in the form of a cross (15) on which it is easier to centre the punch than on a dot or a circle. For punching a

number of sheets for a loose-leaf book a punching gauge should first be made. It is really a kind of template, consisting of a strip of card punched with holes in the required positions (16). It is held on the edge of the sheets to be punched, and the punching is done through the holes in the gauge. With care any number of sheets can be successively and uniformly punched in this way. It is a convenience to lay the sheets flat on a table, with the side to be punched projecting over the edge: this leaves both hands free to adjust the gauge and to manipulate the punch (Plate IIIb).

The combined punch and eyelet tool (14, p. 59) has a gauge upon it which may be set to regulate the distance of the hole from the edge of the sheet, up to a maximum of $\frac{1}{2}$ ", but a card gauge will still be necessary to space the holes laterally.

Saddler's punch. Occasionally it will be necessary to punch holes in positions that cannot be reached with punch pliers,



e.g. at the back of the loose-leaf cover, part of which is shown opened out in 17. This is done with a hollow punch such as is used by saddlers. One with a cutting edge $\frac{1}{8}$ " diameter will, owing to its taper, cut a hole in cardboard large enough for the usual size of eyelet (No. 16 eyelet). The article to be punched is laid on a board (the same one that is used for piercing will do) and the punch is driven home with a light hammer. Since this punch makes a slightly tapering hole in card, and may leave a "burr" or projecting edge at the lower end of the hole, it should always be driven in from the outside of the work. As a rule, such holes will be later made neat by the insertion of eyelets.

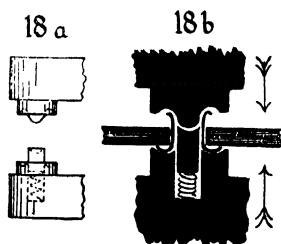
All the usual punching for cords, rings or eyelets can be kept to the standard size of 4 millimetres, or about $\frac{3}{16}$ ", which is the

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size cut by the combined punch and eyelet tool. When screw binders are used, however, they need holes $\frac{7}{32}$ " or $\frac{1}{4}$ " in diameter. A second cutter, 5 millimetres diameter, can be kept for insertion in the hollow-punch pliers, or a suitable saddler's punch may be used for this work.

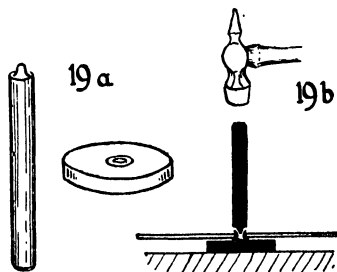
EYELETTING

In all but the earliest stages, holes punched in card, through which cords or rings are to pass, should be protected and made neat by the insertion of eyelets. Holes through cloth-covered card should always be eyeletted, otherwise the edges of the cloth round the hole will fray and become untidy.



Eyelets. Particulars of eyelets are given on p. 25, from which it will be noted that No. 16 size eyelet, which has a hole about $\frac{5}{32}$ " diameter, will serve practically all purposes in school book crafts. This is the size to work with 4-millimetre hollow-punch pliers, or with the combined punch and eyelet tool.

The two sides of the eyelet closer on the pliers are shown in 18a, the centre plunger of the "anvil" or lower part being, in the combined tool, on a spring, so that it will press down as the



closer descends upon it. The eyelet is placed in the hole, and the tool used as shown (18b). Any attempt to use the tool the reverse way round will result in a damaged eyelet. When eyeletting fairly thick card, one firm pressure of the pliers should

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fix the eyelet firmly, but with thinner material it may be necessary to tighten the eyelet by gently hammering it on the inside, placing the work flat upon a piece of card.

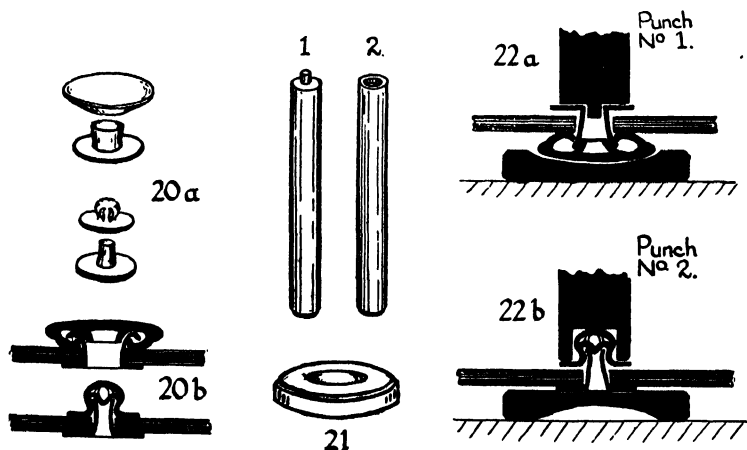
Eyelets in positions which can only be reached by a saddler's punch can obviously not be fixed with pliers, and for these a two-piece eyelet closer (19a) is used. The method of using it is shown in 19b.

In the absence of a proper tool an eyelet may be fixed by driving into it the point of a carpenter's countersink bit, but this method is not really neat, as it tends to mutilate the eyelet on the inside.

PRESS STUDS

Press studs (see p. 26) will occasionally be used in book crafts, as in fixings for writing cases and record albums.

A press stud consists, before being fixed, of four parts which are shown in 20a. When fastened in its final position it is as



shown in section in 20b. It cannot be fixed firmly in very thin material; consequently if the button of a press stud is to be put into a cloth strap, the strap should be thickened with a piece of 10-oz. or 12-oz. strawboard where the button is to come.

The tool for fixing press studs is usually made of brass, and consists of an "anvil" and two punches, shown in 21. The method of use is shown in 22, in which "a" shows the button being fixed, and "b" the stud; the punch in each operation being tapped lightly with a hammer.

CHAPTER 6

Essentials of Constructive Technique:

(3) Adhesives: Their selection, preparation and manipulation; Pressing

THE SELECTION OF AN ADHESIVE—Paste versus glue—PREPARATION OF ADHESIVES—Paste—"Liquid" glue—Scotch glue—Flexible glue—EQUIPMENT FOR USING ADHESIVES—Paste brushes—Glue brushes—Rag—Waste paper—Preparing waste sheets—Sizes of waste sheets—Waste boxes—METHODS OF USING ADHESIVES—General rules—Applying paste—Covering a board, with overlaps and mitres—Other turned-over edges—Setting a board lining—Setting the lining of a cloth back—Setting a double hinge lining—Pasting thick cloth—Pasting part of a sheet: pasting guards—Pasting end-papers—Fixing mull with paste—Use of glue—PRESSES AND PRESSING—The need for pressing—Standing presses—Board and weight press—Screw standing presses—Protecting articles in the press—Pressing boards—Pressing tins—Packing uneven articles when pressing—Removing blemishes from cloth after pressing—Nipping presses—Other types of presses.

After the materials for any book crafts exercise have been set out and cut as described in the foregoing chapters, the final task in construction is that of assembling them into the finished product, and this is largely a matter of using adhesives. In brief, the skilful manipulation of adhesives is one of the most important processes in book crafts.

THE SELECTION OF AN ADHESIVE

Paste versus glue. Practising bookbinders use glue for many purposes, including certain processes of covering, and paste for others such as the application of cover papers, and it appears to be a common but erroneous belief among teachers of book crafts and writers on the subject that, owing to its lack of strength and to some difficulties attendant upon its use, paste cannot be relied upon as the only adhesive in all but the most advanced operations of book crafts.

Glue is not only expensive and inconvenient to prepare and distribute amongst a large group of pupils, but it also offers far more difficulty in working than paste. Most glues, even of the so-called "liquid" variety, must be worked warm or hot, otherwise they are apt to thicken when applied to cloth or board, and to form a kind of jelly which results in hopelessly messy and inefficient work.

A good paste is infinitely better for school book crafts than any form of glue, and with the advent in recent years of reliable cold-water paste powders the difficulties and cost of providing a suitable adhesive for use by large numbers of children have

been considerably lessened. Paste is consequently nowadays very easy to prepare in small quantities as required, and as it is worked cold it needs no special form of container. Moreover, it is clean and easy to manipulate, by the slow novice as well as by the expert worker, and since it must be provided for fixing cover papers, it is an obvious convenience to extend its use to as many as possible of the operations of book crafts.

Recent careful experiments have shown that a good paste can almost entirely supersede glue throughout the book crafts course, with no detriment to the strength of the finished articles and with an immense gain in convenience. With the two exceptions: (*a*) of stiffening tapes for sewing small books without a sewing frame, and (*b*) of rubbing glue into the backs of sewn multi-section books, there is no operation involving adhesive described in this book which cannot be done successfully with paste, providing that the hints given as to its selection and use are carefully followed.

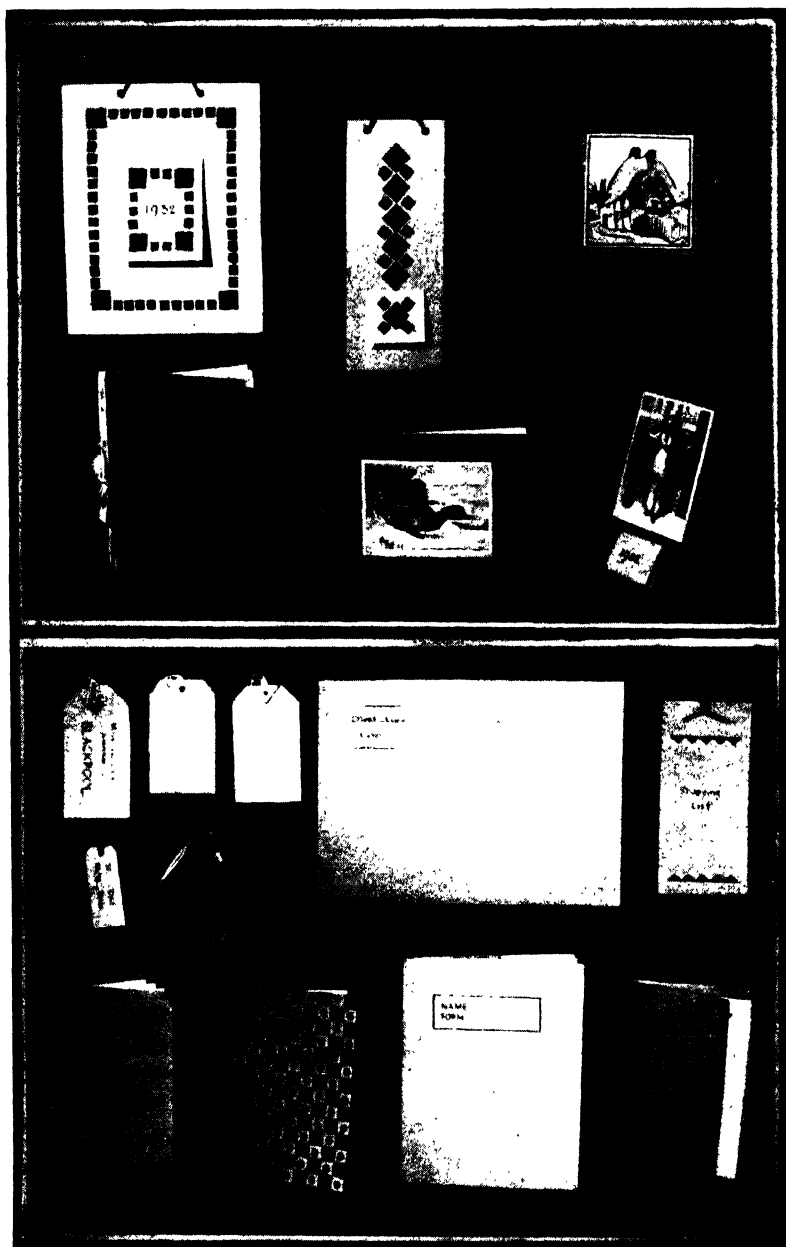
Suitable kinds of paste for general use, and of glue for occasional use, are described in Chapter 2.

PREPARATION OF ADHESIVES

Paste. If the paste powder recommended is used, its preparation is simple. Whatever quantity of paste is needed, a rather less quantity of cold water is put in a bowl or jar. On to the water is sprinkled some of the dry powder, which is well stirred in with a spoon, the powder being repeatedly added in small quantities, stirring all the time, until the paste acquires the consistency of thick cream, free from lumps. Any attempt to add too much powder at a time, or to put the water on to the powder instead of *vice versa*, will result in lumpy paste. If rather too much powder has been added and the paste is too thick, it may be thinned by the addition of a very little water. Any quantity from a quarter of a teacupful to a bucketful can be mixed in this way.

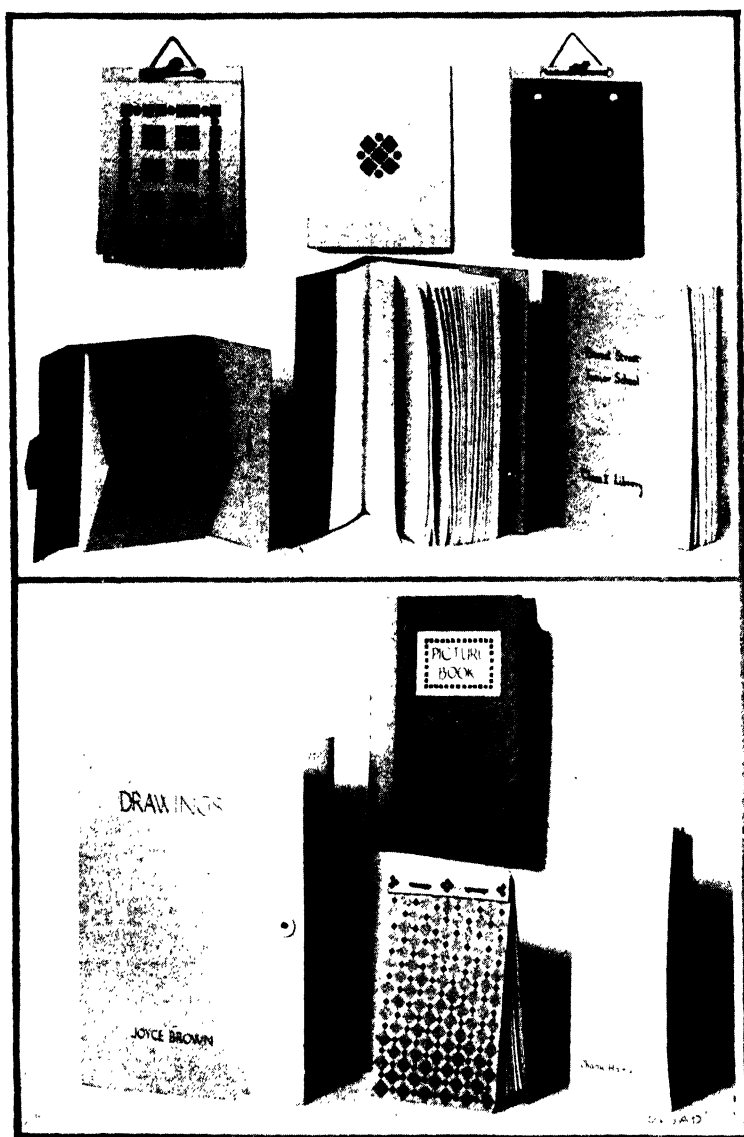
It is a convenience to use two spoons, one for stirring and the other for sprinkling the dry powder, the stock of which must be kept in a tin, free from damp.

For class work, a quantity of paste can be prepared in a large bowl or jar, and "doled out" in small amounts to the small paste pots of the individual pupils. These small pots may be any easily obtained and easily cleaned vessels, such as tiny jam jars, potted meat jars, or small enamel mugs or beakers.



Constructive Work: First stage

PLATE VI



Constructive Work: First stage

PLATE VII

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This paste will keep satisfactorily for about two days. *It is not worth while to attempt to keep it longer, it being far better to form the habit of having clean paste pots and fresh paste for each lesson.* The quantity required can be easily estimated, but even a little waste at the end of the lesson is abundantly off-set by the advantage of having fresh paste in a clean pot next time. The lumps of dried paste which inevitably form round the edge of a pot when paste has been kept in it for a day or two are a constant source of bad work.

"Liquid" glue. To be fit for use in book crafts glue should be liquid enough to run freely from the brush and to spread thinly.

"Liquid" glues sold in tins or jars are rarely thin enough to use cold, and the container should be stood in a basin of hot water to melt the glue before use. A glue such as "Croid" needs no further preparation, but care must be taken that it does not cool down and become thick during work. It must not on any account be placed in water which is continuously boiling, or its adhesive properties will be ruined.

Scotch glue. If the workroom is equipped with a gas stove, Scotch glue, which is cheaper than the proprietary "liquid" glues, can be used. It is prepared as follows:

The cake of glue is broken up by wrapping it in a cloth or thick wad of paper and hammering it. The pieces are covered with cold water and left for twenty-four hours. By this time the glue will have absorbed most of the water and be soft and swollen. It is then put into the inner vessel of a double glue kettle, in the outer vessel of which water is gently boiled for some time, until the glue is fluid and runs freely from the brush. Before the glue is used any scum should be removed with a wire or piece of wood.

The glue may be re-heated from time to time as required, and must be *really hot* during use. Glue tends to lose its quality after several re-heatings, and if the outer pot is allowed to boil dry the glue should be thrown away, as it will never work satisfactorily afterwards.

Flexible glue. Bookbinder's flexible glue is prepared in a similar way, except that it does not require soaking before boiling.

EQUIPMENT FOR USING ADHESIVES

Paste brushes. There is no greater mistake in book crafts than to expect pupils to paste or glue surfaces wider than, say, 2" with tiny brushes; and for all but these small surfaces a good large

brush is essential, the use of brushes which are too small being a common cause of imperfect work.

The most serviceable type of brush for general pasting is the 1" flat varnish brush shown in 1. It can on occasion be used for glue, and will be required for making paste coloured papers. A few 1½" brushes of the same type will be useful for large surfaces.



1

When a smaller brush is required the ½" flat bristle brush used for printing, and shown in 3, p. 102, is excellent, or a small gum brush may be used instead. The teacher, however, who tries to depend upon these small brushes for work of any considerable size will be severely handicapping his pupils.

Glue brushes. For continual use with hot glue a round tin-bound glue brush should be provided, as paste brushes are likely to lose their bristles under this treatment.

All brushes, whether used for paste, glue or colour, must be carefully washed after each lesson.

Rag. A small piece of clean rag, or a duster, is essential during pasting and covering. It should *not* be used for rubbing down paper or cloth or for wiping brushes, but should be kept at hand specially for wiping the finger-tips free of paste.

Waste paper. Waste paper on which to lay materials when pasting, for pasting guards, and for rubbing down materials after covering, will be required during the book crafts course in great quantity.

Fortunately, in the shape of newspaper, it can easily be obtained without expense, and a large stock should be collected and maintained. If the methods described in this book are followed, each piece of paper being discarded *immediately* it is the least bit soiled with paste, the consumption of waste paper will be prodigious, but it will cost nothing and its use will be well worth while.

After it is collected, it should be slit up, using a ruler or table knife, into half or quarter sheets, and stored in this form, a few pieces being given to each pupil as required. Thus the pupil,

ESSENTIALS OF CONSTRUCTIVE TECHNIQUE

instead of having a folded paper on his table, from which the top sheet can only be removed by tearing, has a pile of single pieces. If the top one has wet paste on it, it can be whisked away in a moment; if a clean sheet or two are required for rubbing down or for a pasting guard, they are instantly available.

It is impossible to lay too much emphasis on the importance of a system of this kind, as speed and an instantly available supply of waste paper of convenient size are the two factors most essential to clean and successful working with adhesives.

For all except large work, a quarter-page of an ordinary newspaper, usually about $11\frac{1}{2}'' \times 9\frac{1}{2}''$, is suitable for these waste sheets. A small stock of half-pages should also be kept for use as required. A useful source of such sheets will be found in old periodicals of the "Radio Times" or "London Opinion" size and quality of paper. If the wire staples which bind these are removed and the books slit up the back, a handy supply of waste sheets is at once ready.

Waste boxes. Since the worker is continually urged to remove from his work-table all waste sheets, cuttings, etc., *as soon as they are no longer needed*, a supply of receptacles for such waste must be provided within easy reach of the pupils. One waste-paper basket in a classroom will be insufficient; several baskets or boxes, which need not be very large, should be placed about the room during the book crafts lesson.

METHODS OF USING ADHESIVES

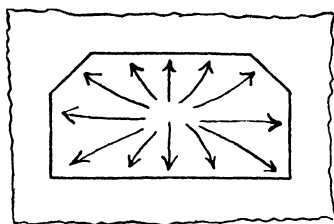
General rules. Certain general rules apply to all operations involving pasting or gluing, and must be followed if success is to result. They may appear simple and obvious, but their neglect is an all-too-common cause of bad work.

- (a) *Never put the brush deeply into the paste or glue, and do not keep it in the pot when not in use.* When dipping the brush, only the ends of the bristles should enter the adhesive; even then more than is needed will often be taken up and must be removed by wiping the brush on the edge of the pot. When not actually being handled, the brush should be laid across the top of the pot, or on a piece of paper specially placed for the purpose, and *not* anywhere else on the work-table.
- (b) *Never leave a pasted waste sheet for a moment upon the work-table: throw it into the waste-box directly it has been used, before going on to fix the material that has just been pasted.* If pasted

paper has been left about, sooner or later (and probably sooner) the paste will certainly get where it is not wanted—on to the finished work or new material.

- (c) *Work quickly.* Paper and cloth will swell, curl and soften if left too long after pasting. Glue will turn into jelly in a very few seconds after being spread.
- (d) *Never handle a piece of pasted material more than you can possibly help.* When you can, lay it on a clean waste paper and press the board to be covered down upon it.
- (e) *Never rub down material with the fingers—always put a piece of waste paper over it and rub that.* You can then rub vigorously and press the material down thoroughly without fear of soiling or creasing it.

Applying paste. To paste a sheet all over, lay it face down on a waste paper larger than the material, and hold it with the tips of the fingers of the left hand. Work the paste from the centre outwards (2) and never bring the brush inwards from the edge,



2

or paste will get under the edge and soil the front of the material. Work boldly and quickly, allowing the brush strokes to pass right on to the waste paper to be sure of a well-pasted edge. No lumps or blobs of paste should remain when the sheet is finished. The finger-tips of the left hand will get a little paste on them, which must be wiped off on the rag before going on to the next operation.

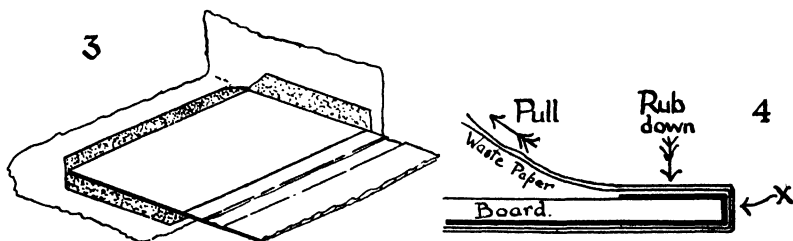
Suppose that the material is a cover for a board case or reading cover, with mitred overlaps. Work as follows:

(a) Carefully lift the material, remove and discard the pasted waste sheet, and drop the material on to the middle of two thicknesses of waste paper.

(b) Lay the board in position on the pasted material and press it down with one hand.

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(c) With the other hand take the double thickness of waste paper by the edge, lift it up, bringing the overlap with it, and pull the overlap tightly against the edge of the board (3).



(d) Still pulling the waste paper tight, bring the overlap right over and rub it down (4). Run the folder along outside the waste paper at X (4) to press the material well up to the edge.

(e) The head overlap should have been done first. Repeat with the tail overlap. The two corners will then be as 5a. Still keeping the board in position on the waste paper, tuck in the corners with the folder as in 5b, then bring the fore-edge flap over and rub down as before, the final appearance of the corner being as 5c.

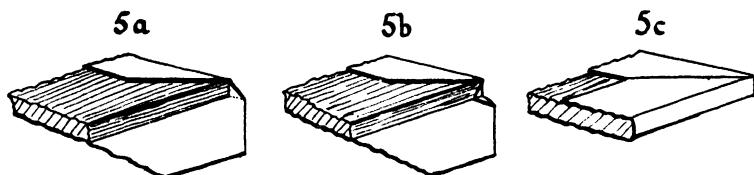


Plate IV, a and b, shows these important processes, but it should be noted that the plate is slightly incorrect in that it shows the fore-edge being turned over first instead of last.

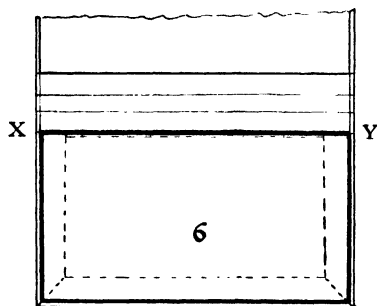
(f) The board can now be turned over, and the outside of the cover finally rubbed down with a sheet of waste paper over it.

All turned-over edges are worked in this way, using a double waste paper to pull them up close and rub them down, e.g. the method is applicable to the head and tail overlaps of a cloth back or case, to cloth book or blotter corners, to manilla paper turned over on itself for strength, as in some of the early exercises, and to the flanges on envelopes.

A lining paper which has to be fixed to show a margin all round cannot be fixed face down in this way, and must be laid in position, bringing paper to board instead of board to paper

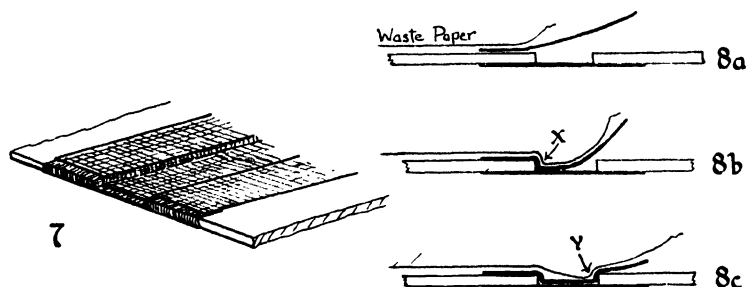
BOOK CRAFTS FOR SCHOOLS

as before. Suppose it is a lining for the case already mentioned. The heavy lines in 6 show the position of the lining. Having been cut to size and pasted, it is carefully lifted by the



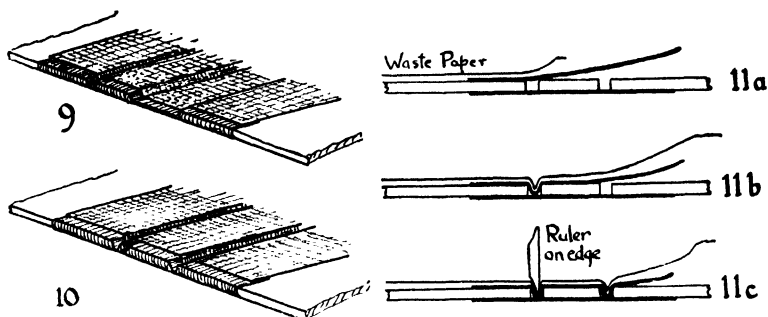
ends, and the edge XY brought into position. The rest of the sheet is then lowered into place, a single sheet of waste paper placed over it and the whole well rubbed down.

The steps in setting the lining of a cloth back (7) are shown in 8. First one edge is set in place and rubbed down (8a), then the waste paper is moved up and the cloth worked into the first hinge at X (8b) with a folder. Next the cloth is worked into the



second hinge at Y (8c) and lastly the remaining edge is rubbed down. If both the edges are set first it will be impossible to work the cloth neatly into the back, and it will stretch and drag under the folder.

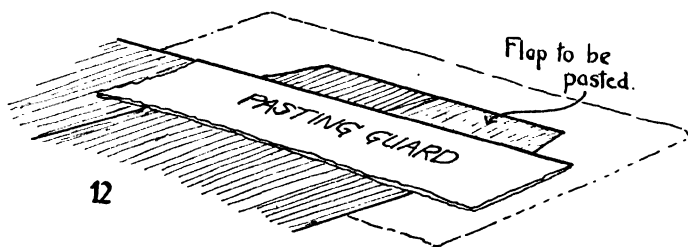
A double hinge lining (9), or the lining of a case with a square board back (10), are set from one edge in a similar way, as shown in 11a, but in order to prevent the cloth drawing out of the first hinge before the second is set, the edge of a ruler should be held in the first hinge while the cloth is being pressed into the second with the folder (11b and c).



Heavy bookbinder's cloth such as thick art canvas or buckram will be difficult to fix with paste if worked directly after pasting, as is done with paper or thinner cloth, because the turned-over edges may fail to stay in place after rubbing down. To overcome this difficulty, paste the cloth and set it aside for a few minutes, until the first pasting is almost dry, but not until the cloth is bone dry, or it will curl up badly. Then paste the cloth over again, and fix it at once, when it will be found to stick down as easily as thinner cloth.

So far the operations described have involved the pasting of the whole of a sheet before fixing it, but there are many occasions in book crafts when only part of the sheet, such as the flaps on an envelope, have to be pasted.

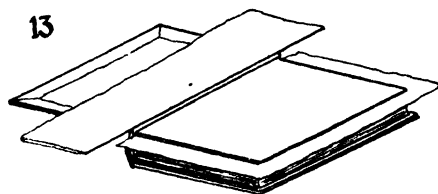
The pasting of these involves a new principle—the use of pastinguards. The paste is not kept within limits by “painting”



it into the required space—that would be both slow and unsatisfactory; instead, the part to be kept free of paste is covered with a piece of waste paper, known as a “pasting guard”, so that only the area to be pasted is exposed. Then the paste brush is worked boldly over the material and over its guarded margins. When the guard is removed only the required area retains the paste.

The method is shown in 12, in which the pasting of an envelope flap is shown. A pasting guard invariably needs a straight edge, and the quickest way to obtain this is to fold a waste paper.

Much ingenuity has sometimes to be exercised in devising suitable means of guarding in order to paste awkwardly placed flaps and turnovers, which frequently occur in book crafts, and examples of which will be found in the later chapters of this book.



A special example of a pasting guard is given in 13, in which is shown the method of guarding for pasting the end-paper of a book. As the book is nearing completion at this stage, the utmost care has to be taken to prevent the paste getting on to the edges of the pages, or on to the finished cover.

Mull is very difficult to manipulate if pasted or glued, as it is so open in texture that the adhesive goes right through it, rendering it a clammy, sticky fabric that is very easily pulled out of shape. Consequently the paste or glue should never be brushed on to the mull, but on to the book back or paper to which it is to be fixed. The dry mull is then rubbed down into position with waste paper. Even if a little of the adhesive comes through the mull and sticks to the waste paper when pressing, the latter can easily be torn away. As mull is invariably covered up, any slight traces of adhering paper will be no disadvantage.

Use of glue. Everything that has been said about the methods of using paste applies equally to the use of glue, which, however, is much more difficult to work. Again it should be emphasised that it must be used *hot* and *sparingly*, as once a thick layer of glue has "jellied" on the material it is impossible either to rub the material down or to make it adhere properly.

PRESSES AND PRESSING

Paper, card and cloth swell when damped with adhesive, and shrink when drying. This causes a tendency to curl which is more or less apparent according to the thickness and nature of the material, and consequently all book crafts exercises in which

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adhesive has been used should be pressed until the adhesive has set firmly enough to prevent the pasted or glued surfaces from curling away from one another at the edges. Pressing is also necessary to prevent boards from drying with a permanent curve or warp.

No book crafts work-room is therefore complete without some form of press, into which all articles are placed at least for a short time after assembling.

Standing presses. Presses used for such a purpose are known as standing presses, and those of the professional worker are large and expensive affairs. A much smaller and less costly substitute will serve the purpose of the book crafts course.

Board and weight press. The simplest form of press, and one that is essential for large work, is a couple of flat boards, or a flat board and a table top, between which the articles to be pressed are placed, and on top of which is placed any handy weight, such as a pile of books or a heavy box. A pile of drawing boards makes an excellent press, as the lower boards can be used to separate the articles being pressed. Similarly the stock of strawboard, weighing perhaps 30 or 40 lb., can be laid flat on a table or on the floor and used as a press, providing that, if the floor is used, the articles are placed above the lowest sheet and not below it!

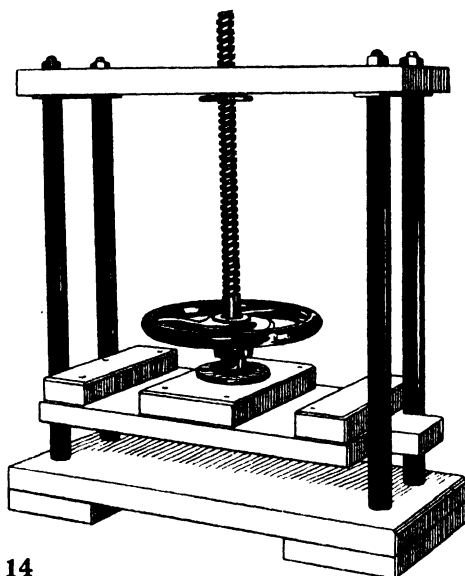
Screw standing press. A simple standing press that can be bought for less than a couple of pounds is shown in 14, and is most effective. Plate V shows two simple standing presses made by the pupils in school handicraft workshops. The first utilises a pile of 16" \times 12" drawing boards, with folding wedges to give the pressure. The second is a very simply constructed but strong and efficient press using a steel vice screw bought for about 8s. 6d.

When articles are being pressed they should always be laid between sheets of waste paper, and, unless they are very thin and flat and are all exactly of the same size, must be separated by pressing boards of some kind. Unless this is done the shape of one article will be impressed upon the next, and even small variations in thickness, such as overlaps and flanges, will cause unevenness in the adjacent layers of articles.

Pressing boards. For thin flat articles and the light pressing, which is all that is necessary up to the end of Stage II, thick strawboards or millboards will serve excellently for pressing

boards. The quarter-sheets used as cutting boards and described on p. 55 are admirably suited for the purpose.

For heavier pressing and for thicker articles wooden pressing boards, which are made of $\frac{1}{2}$ " or $\frac{3}{4}$ " plywood, are required, though almost any flat board of even thickness will do if it is not



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warped. Two or three pairs of these, disposed equally throughout a pile of articles, with the intermediate articles separated by cardboards, will be sufficient for the needs of a fairly large class. The 12"×8" boards will serve most purposes; large articles can be pressed between drawing boards or cardboards under a weight.

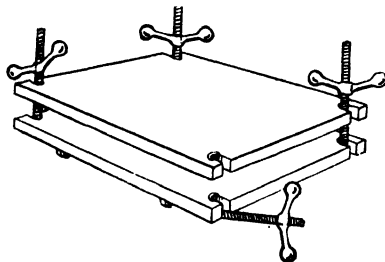
Pressing tins. For pressing the end-papers of books after pasting, it is desirable to avoid impressing the shape of the overlaps of the cover and corners, which come on the inner sides of the boards, on to the relatively spongy and compressible pages of the book. Pressing tins, which are simply flat sheets of tinplate, are therefore, after being covered with waste paper, or better still, with waxed paper, inserted inside the end-papers during pressing. Three or four dozen of these tins, of size 8"×5", with a few larger ones, will meet the needs of a class all engaged in bookbinding, and they will not be needed at all until Stage III is well advanced.

ESSENTIALS OF CONSTRUCTIVE TECHNIQUE

When pressing articles which are uneven in thickness, such as books with pockets laid open flat, it is necessary to pack up the thinner parts of the articles with loose strips of card so as to level up the surface and distribute the pressure equally. A thick pad of soft paper (newspaper) placed above and below such an article will be a further help in equalising the pressure. Articles with press studs or other projections must be specially packed, using pieces of card with holes in them to clear the projections, and plenty of soft paper above and below to avoid squeezing them out of shape.

In using paste to fix cloth, especially if the latter be thin or of inferior quality, it will sometimes be found that traces of the waste paper used in pressing adhere to the surface of the cloth when dry. These, and small traces of paste, can be easily removed with a soft indiarubber, but on no account should any attempt be made to remove such blemishes by damping, or the colour of the cloth will be irretrievably marred. If, however, much trouble of this sort arises, the paste may be too thin, or the cloth too poor in quality, each of which defects has its obvious remedy.

Nipping presses. For certain purposes such as the making of split boards and the mounting of labels, it is not necessary to



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leave the article to dry under pressure, only a few minutes' "squeeze" being required. A standing press, if it is free, can of course be used for this, but if, as is usual, the standing presses are occupied, it is a great convenience to have a nipping press for occasional use. An iron press of the now almost obsolete type formerly used in offices for copying letters can often be cheaply picked up second-hand. It does not open widely enough to be of much use as a standing press, but it makes a very handy nipping press. A cheaper substitute is shown in 15. This is useful for light pressures, and can also be used as a standing press for a few thin articles.

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There are other presses used in book crafts and in bookbinding, such as the trimming press and the laying press, but a description of these would be out of place in this chapter. The trimming press is described elsewhere in the book (p. 57).

By far the most important press to the book crafts worker is the standing press. It may be said that if there is ever a little extra money to spend upon equipment it cannot be better invested than in one or two extra standing presses, as, if classes are large, these presses will rarely stand idle.

Part Two

The junior stages: constructive and decorative work

CHAPTER 7

First Stage—Types of Constructive Work

CHRISTMAS CARDS—CALENDARS—TIE-ON TAGS OR LABELS—SIMPLE BOOK—TIED JOTTER—COVER FOR EXERCISE BOOK—LARGE WORK ENVELOPE—COVERED JOTTER FOR SCHOOL USE—POSTCARD CASE—SLIP-ON READING COVER—SHOPPING LIST, MEMO PAD, OR SMALL JOTTER PAD—CLOTH BACKED SCRAP BOOK OR ALBUM—LACED MEMORANDUM PAD OR JOTTER—SIMPLE PORTFOLIO—SPELLING BOOK.

I CHRISTMAS CARDS.

Type A. (Left-hand bottom of Plate VIa.)

Cover: 1 pc. pastel paper, Cr. 8vo, $7\frac{1}{2}'' \times 5''$.

Leaf: 1 pc. writing paper, L. Post 8vo, trimmed, $8'' \times 5''$.

Cotton, silk or ribbon tie about $14''$ long.

Mark leaf with template or measurement to $7\frac{1}{4}'' \times 5''$, and cut to size. Fold cover and leaf, and tie as 1a after decoration, or mounting of picture, and lettering have been done.

Envelope for Type A.

1 pc. drawing paper, Imp. 8vo, $11'' \times 7\frac{1}{2}''$, or

1 pc. writing paper, L. Post 4to, trimmed, $10'' \times 8''$.

If Imp. 8vo is used, mark with measurement or template to $10'' \times 7\frac{1}{2}''$ and cut to size. Fold as 1b, using template exact size of folded Christmas card, or the finished card itself as template, over which to fold.

Open and cut as 1c; refold and paste as 1d. Dry under pressure. When dry trim opening and flap as shown.

Work similarly with L. Post 4to, which will give rather wider flaps.

Type B. (Centre bottom of Plate VIa.)

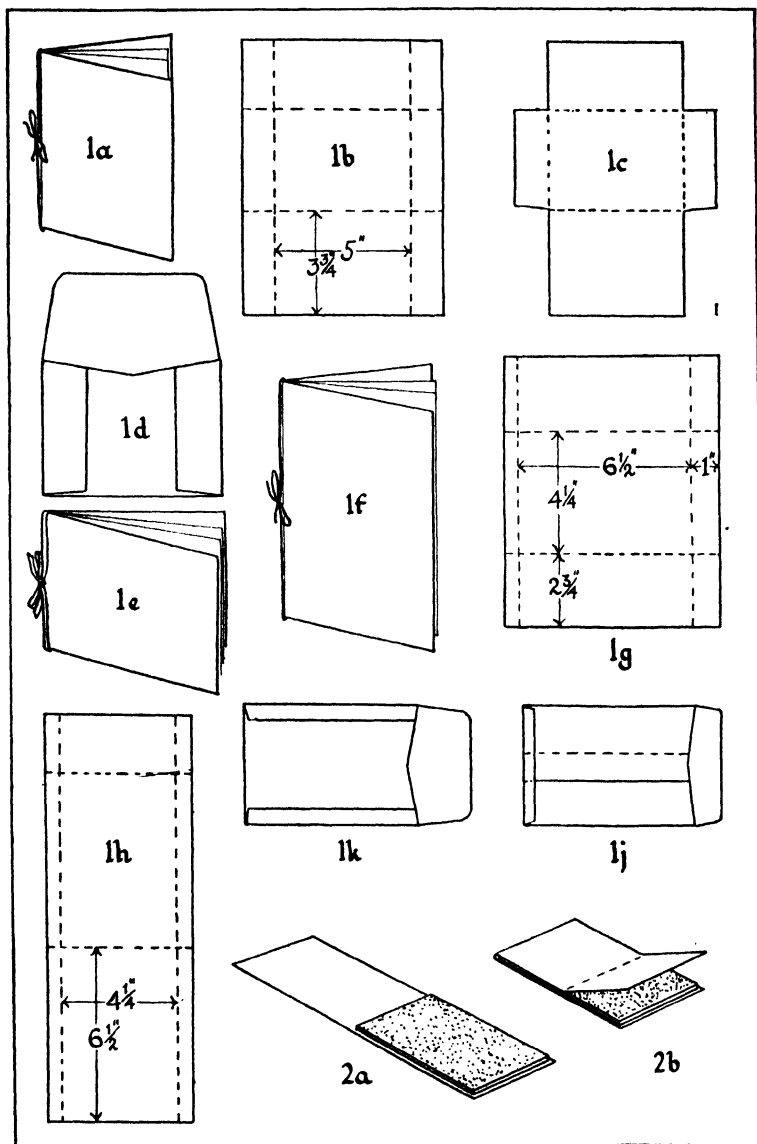
Cover: 1 pc. pastel paper, Cr. 4to, folded and slit lengthwise to make $10'' \times 3\frac{3}{4}''$, i.e. 1 Cr. 4to sheet will make two covers.

Leaf: 1 pc. writing paper, L. Post 4to, trimmed, folded and slit lengthwise to make $10'' \times 4''$, as for cover.

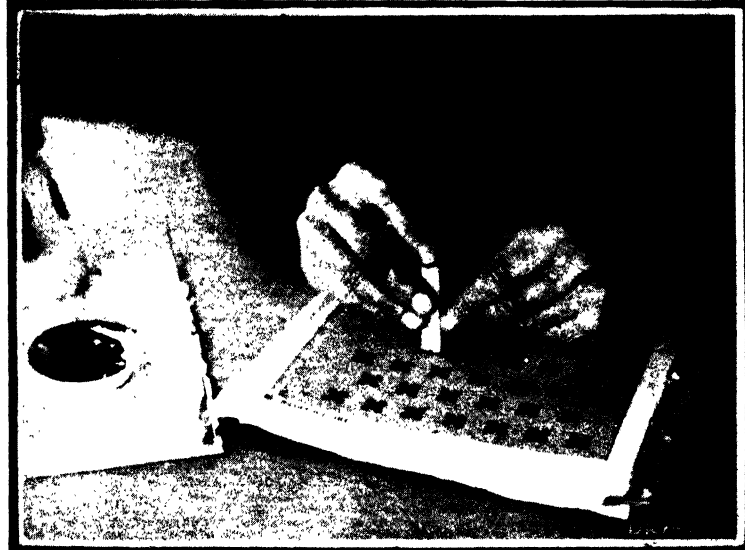
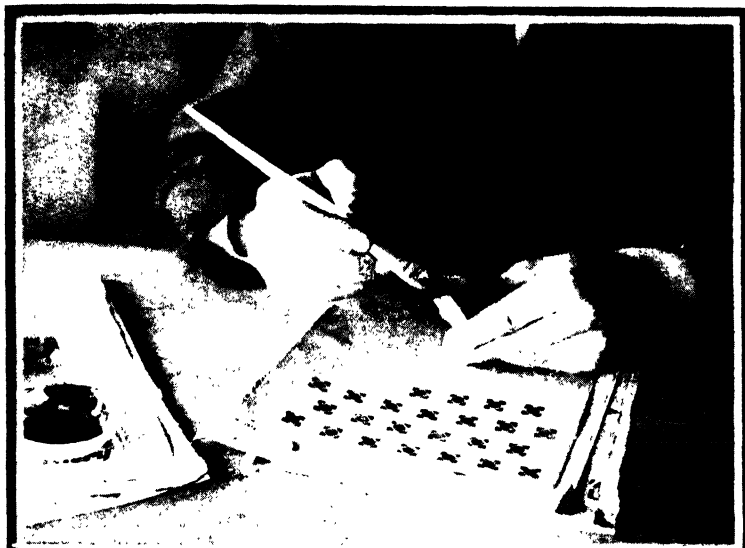
Cotton, silk or ribbon tie about $10''$ long, or thread.

Mark leaf with template or measurement to $10'' \times 3\frac{1}{2}''$, and cut to size. Fold cover and leaf, and tie as 1e, after decoration, or mounting, and lettering have been done. Alternatively the fold may be pierced and sewn with one large stitch.

BOOK CRAFTS FOR SCHOOLS

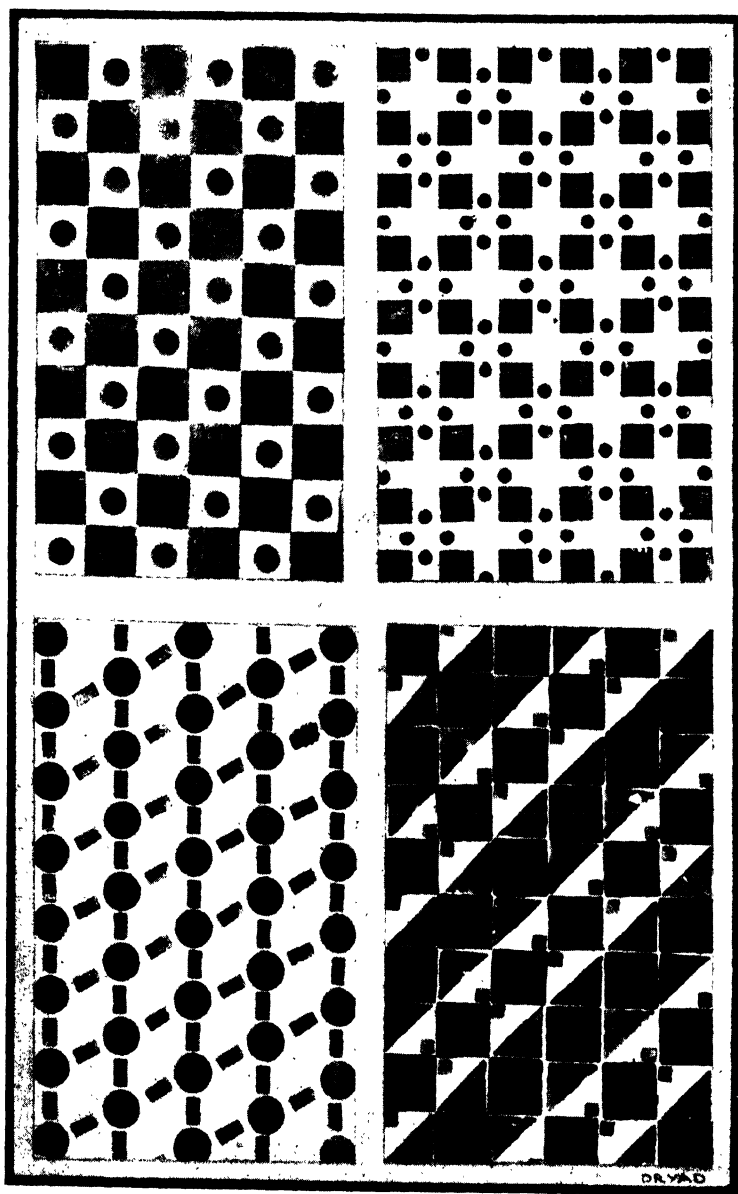


Stick Printing: Applying the colour



Stick Printing: Making the imprint

PLATE VIII



Patterns printed with plain sticks

PLATE IX

Envelope for Type B.

Proceed exactly as for Type A envelope.

Type C. (Right-hand top of Plate VIa.)

Cover: 1 pc. pastel paper, Cr. 4to, $10'' \times 7\frac{1}{2}''$.

Leaf: 1 pc. writing paper F'cap. 4to, trimmed, $8\frac{1}{4}'' \times 6\frac{1}{2}''$.

Cotton, silk or ribbon tie about $19''$ long.

Mark cover with template or measurement to $8\frac{1}{2}'' \times 6\frac{1}{2}''$ and cut to size. Fold cover and leaf, and tie as if, after decoration or mounting, and lettering have been done.

Envelope for Type C.

1 pc. writing paper, L. Post 4to, trimmed, $10'' \times 8''$, or

1 pc. drawing paper, Imp. 4to, folded lengthwise and slit to make 2 pcs. $15'' \times 5\frac{1}{2}''$, i.e. 1 pc. Imp. 4to will make 2 envelopes.

Fold over template or over the Christmas card itself as 1g for $10'' \times 8''$ sheet, or as 1h for $15'' \times 5\frac{1}{2}''$ sheet.

Open, cut, refold and paste as 1j or 1k respectively.

Trim flaps and openings when dry.

Note: The first envelope gives very narrow top and bottom flaps, but as the top flap is to be tucked in and not stuck down it will serve its purpose. The second gives narrow side flaps, which will need care in pasting down.

! CALENDARS.

Type A. (Left-hand top of Plate VIa.)

1 pc. tinted board or thick cover paper, Roy. 16mo, $6\frac{1}{4}'' \times 5''$.

A small calendar.

Cotton, silk or ribbon tie, about $4''$ long.

Decide and mark position of calendar. Pierce or punch holes for hanger. Print decoration. If desired, cover calendar with a small piece of suitable pastel paper, or of similar card to the calendar back. Stick calendar in place, dry under pressure, then tie hanger.

Type B. (Centre top of Plate VIa.)

1 pc. tinted board or thick cover paper, Roy. 16mo, cut lengthwise down the middle, will make two calendar backs, each $6\frac{1}{4}'' \times 2\frac{1}{2}''$.

A small calendar.

Cotton, silk or ribbon hanger, about $4''$ long.

Proceed exactly as for Type A.

Type C. (Right-hand bottom of Plate VIa.)

1 pc. thick cover paper, Roy. 8vo, cut lengthwise down the middle, will make two calendar backs, each $10'' \times 3\frac{1}{8}''$.

1 pc. 10-oz. strawboard, $4\frac{3}{4}'' \times 3''$.

1 small calendar.

Fold paper crosswise, paste strawboard on one side, and fix as 2a. Fold free part of paper back half-way down, paste board at back and fix as 2b. Mount picture and calendar.

3 TIE-ON TAGS OR LABELS. (Left-hand top of Plate VIb.)

Type A. Small tags suitable for labelling gifts, finished craft specimens, etc.

1 pc. pastel paper Cr. 16mo, $5'' \times 3\frac{3}{4}''$, will make 4 tags. Cotton or thin string tie about 6" long for each tag.

Fold and cut sheet into four as 3a. Mark top of each as 3b, and fold on XX. Open out, and cut off corners. Paste the end flap, using pasting guard as 3c; fold over, rub down, and when dry punch or pierce hole. Thread with coloured knitting cotton or thin string (3d).

Type B. Luggage tags. There are three ways of making these—the first gives a longer tag than the other two from the same size sheet.

1 pc. manilla paper Cr. 8vo, $7\frac{1}{2}'' \times 5''$ will make three tags. For first and second methods 100-lb. or 120-lb. manilla may be used if stiff tags are desired. For the third method use 80-lb. manilla, as thicker paper will be hard to fold.

Thin string tie about 10" long for each tag.

First Method: Fold and cut the Cr. 8vo sheet into three equal parts, each $5'' \times 2\frac{1}{2}''$. Mark out each piece as 3e. Cut off corners; also cut a $\frac{1}{2}''$ square of manilla paper, preferably of a different colour, and paste on as 3f. When dry, punch and lace.

Second Method: This is similar to the method for making the small pastel tags given above. When Cr. 8vo sheet has been cut into three, set out each part as 3g. Complete as for small tags.

Third Method: After Cr. 8vo sheet has been cut into three, mark each piece as 3h. Fold corners over as 3j, and then

TYPES OF CONSTRUCTIVE WORK

fold point over as 3k. The double fold will be too thick to paste easily, so punch and hold together with an eyelet.

The making of luggage tags will be more attractive to the pupils if sheets of various tints are given out, and the pupils allowed to exchange their small pieces so that each has three different colours.

Either of the first two luggage tags can be made stronger (and more difficult to make) by fixing an eyelet.

4 SIMPLE BOOK. (Left-hand bottom of Plate VIb, two specimens.)

This is the simplest of all single-section books. As trimming edges is not yet possible, the cover should be chosen to overlap the leaves. Small children will find many uses for such books, such as for words, spellings and other simple school or private "notes".

Cover: 1 pc. pastel paper, Cr. 4to, $10" \times 7\frac{1}{2}"$.

Leaves: 8 or 12 pcs. writing paper, F'cap. 4to, trimmed, $8\frac{1}{4}" \times 6\frac{1}{2}"$.

Thread, about 15".

Steps:

- 1 Fold the leaves as 4a. Three or four may be folded at a time. Place folds inside one another.
Cut cover to $9" \times 7"$ and fold.
- 2 Lay leaves in position on cover. See that all folds are in line and that top and bottom margins of cover are equal. Mark positions for piercing as 4b, hold firm and pierce with awl.
- 3 Have needle ready threaded. Hold book with one half flat on table, and pass needle through as follows:
Out at centre.
In at top, and down the middle.
Out at bottom.
In again at centre (4c).

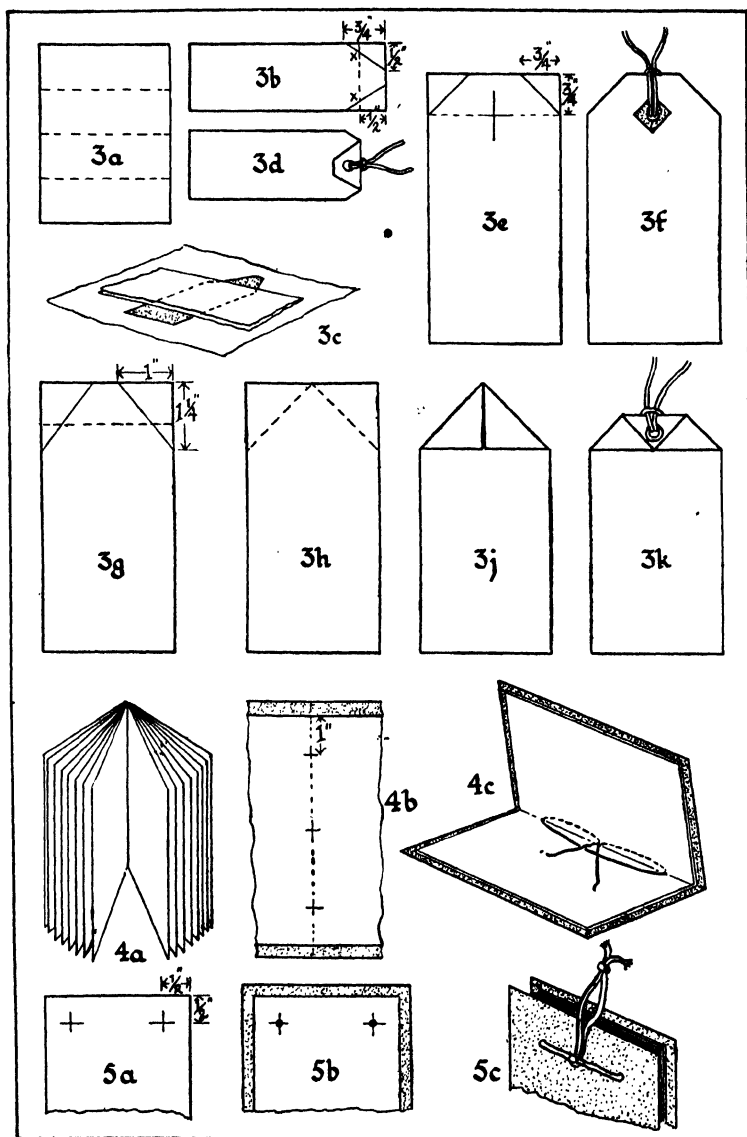
See that the ends come each side of the centre thread.

Pull tight in line with the fold, and tie across centre thread.

Trim off spare thread to within about $\frac{1}{2}"$ of knot.

Decoration and lettering: The cover may be a sheet already printed as an exercise with an all-over stick pattern, or the decoration may be printed on after book is made. Letter with name and other wording in narrow pen lettering, using a label if desired.

BOOK CRAFTS FOR SCHOOLS



TYPES OF CONSTRUCTIVE WORK

5 TIED JOTTER. (Right-hand top of Plate VIb.)

Useful as a "tear-off" jotter for school purposes such as mental arithmetic tests, etc., or for home purposes as a kitchen, shopping or laundry list, or for milkman's orders, etc., or as a shaving paper pad.

Covers: 1 pc. pastel paper, Cr. 4to, $10" \times 7\frac{1}{2}"$, will make three covers, of which each pupil will require two; *i.e.* 2 pcs. Cr. 4to will serve for three pupils.

Leaves: For a 24-leaf pad, 8 sheets writing paper, F'cap. 4to trimmed, $8\frac{1}{4}" \times 6\frac{1}{2}"$.

Cotton tie about 7" long.

Steps:

- 1 Fold each sheet of writing paper into three, and cut to size, $6\frac{1}{2}" \times 2\frac{3}{4}"$.
- 2 Mark and cut two cover pieces $7" \times 3\frac{1}{4}"$.
- 3 Mark one of the leaves as 5a and use this as a pattern for piercing. Take about 8 pieces at a time, with the pattern on top, align carefully and pierce all the leaves.
- 4 Place both covers together, lay pattern on them in position (5b) and pierce covers.
Thread and tie as 5c.

Decoration and lettering: Cover may have very simple stick decoration printed after assembling, or a ready-printed all-over pattern may be used for covers. Letter an appropriate title.

6 COVER FOR EXERCISE BOOK. (Centre bottom of Plate VIb.)

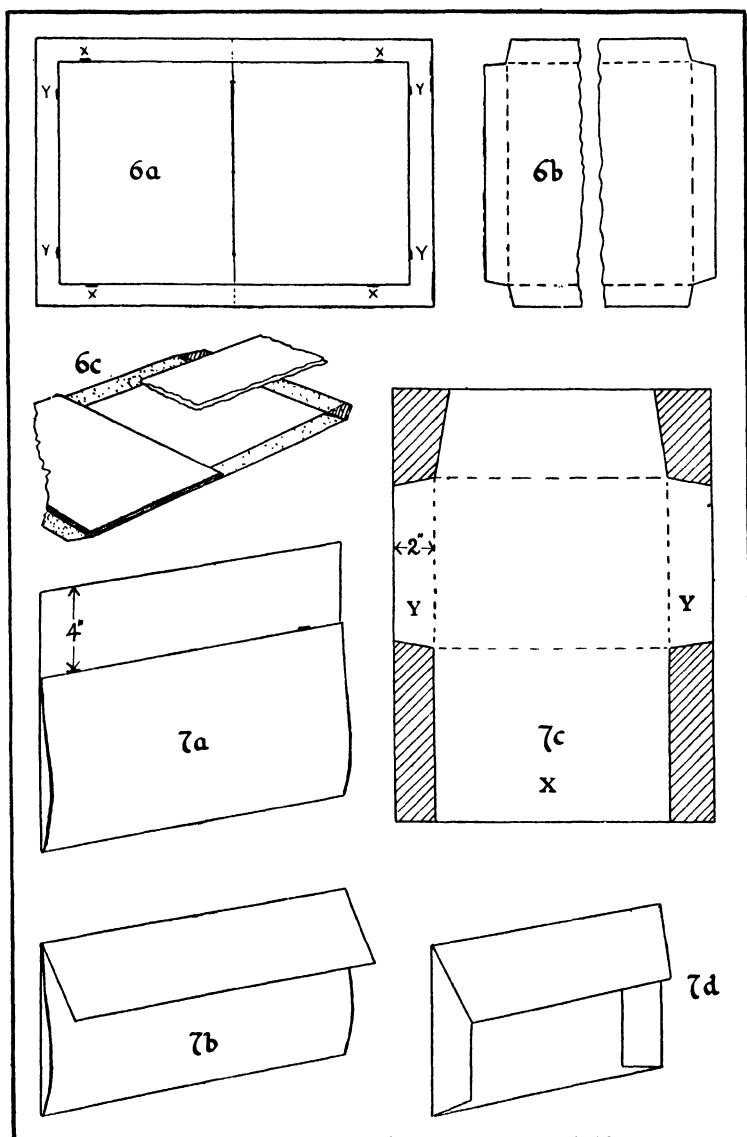
It is a useful exercise for the pupils to learn properly to cover their exercise books, which usually have flimsy covers. The same method applies to the making of a fixed paper cover for any single-section book.

Cover: for the usual F'cap. 4to trimmed exercise book ($8\frac{1}{4}" \times 6\frac{1}{2}"$) a Cr. Folio sheet ($15" \times 10"$) will suit. For other sizes of book allow at least $\frac{3}{4}"$ overlaps. 80-lb. manilla paper makes durable and tasteful covers, or any other good smooth and tough paper can be used.

Steps:

- 1 Fold sheet in half, reopen, and lay book, open, with centre of back on fold, so that the margins at top and bottom are equal. These will actually come to $\frac{1}{8}"$; but it may be

BOOK CRAFTS FOR SCHOOLS



TYPES OF CONSTRUCTIVE WORK

better at this stage to let the young pupils judge the position of the book rather than attempt to measure these fractions.

- 2 Mark with pencil at four points X and at four points Y (6a). Fold sheet on lines XX and YY, and cut away the corners as 6b. Cut slightly on the slant to allow turn-overs to clear each other when turned in.
- 3 Replace book and turn in folds at top and bottom, tucking them under the leaves of the book at head and tail. Paste each flap at the points shown shaded in 6c, using a pasting guard as shown. Turn in end, fold and press down. Repeat with opposite edge, close book and press with waste paper put inside the covers to protect the leaves from excess paste.

Lettering: Letter name, form, subject or other required titles on front. Rule frames round these if desired.

7 LARGE WORK ENVELOPE. (Centre top of Plate VIIb.)

This will be exceedingly useful for the pupil to store his work in progress, or it may be used for other school purposes.

- 1 pc. manilla paper, Crown (20" × 15"). 80-lb. paper makes a rather flimsy envelope—100-lb. or 120-lb. is better. If the pupils are in teams or groups, each group may choose a different colour to facilitate identification when the envelopes are given out before a lesson.

Steps:

- 1 Make two marks 4" from one end of the sheet and fold over the other end to meet these marks (7a). Press fold well down.
- 2 Fold over top flap (7b).
- 3 Open out, and fold edges in 2" as 7c. Cut away shaded parts, refold, and see that piece X is not too wide, so as not to buckle when side flaps are folded over.
- 4 Paste flaps YY, using pasting guards, fold over, rub down and dry under pressure. The finished envelope is shown in 7d.

Decoration and lettering: If desired a stick-printed border or corners may be worked on the finished envelope. The name and any other required title should be lettered with narrow pen.

BOOK CRAFTS FOR SCHOOLS

8 COVERED JOTTER FOR SCHOOL USE. (Right-hand bottom of Plate VIb.)

Leaves: for a 24-leaf pad, 12 sheets writing paper, F'cap. 4to trimmed, $8\frac{1}{4}" \times 6\frac{1}{2}"$.

Back of pad: 1 p.c. 10-oz. strawboard, $6\frac{1}{2}" \times 4"$.

Cover: 1 pc. 100-lb. or 120-lb. manilla, Cr. folio, $15" \times 10"$.

Two paper fasteners for the pad.

Steps: The Cover:

- 1 Make folds across sheet as 8a.
- 2 Make fold $2\frac{1}{2}"$ from lower edge; mark out the piece at right-hand top corner; cut away shaded parts as shown.
- 3 Fold in flaps X and Y in this order, and mark on X where Y comes (8b). Open out Y, and using pasting guards as 8c, paste lower part of flap X. Fold Y over and press down.
- 4 Paste inside both flaps, using guard as 8d. Bring the whole pocket over, press down and dry under pressure. When dry, slide the cardboard back of the pad into the pocket.

Steps. The Pad:

- 1 Fold the sheets in half, and slit down forming pieces $6\frac{1}{2}" \times 4\frac{1}{8}"$.
- 2 Cut the card back to shape shown dotted in 8e, lay sheets in place upon it, mark and pierce for fasteners.
- 3 Fix sheets to back with fasteners, opening them *across* the pad.

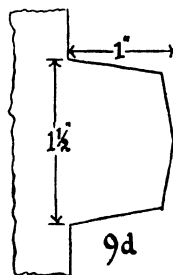
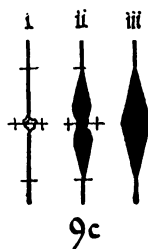
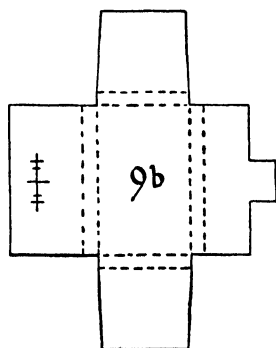
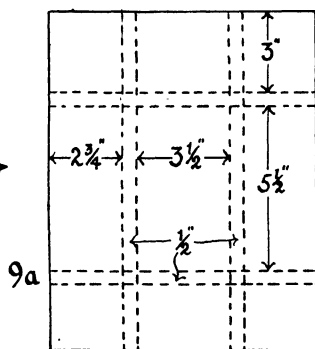
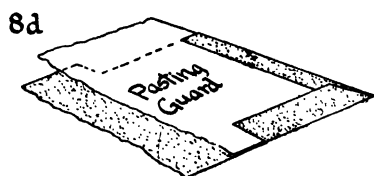
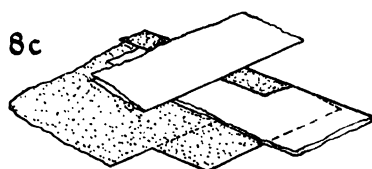
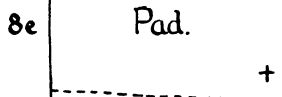
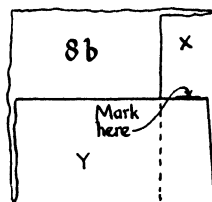
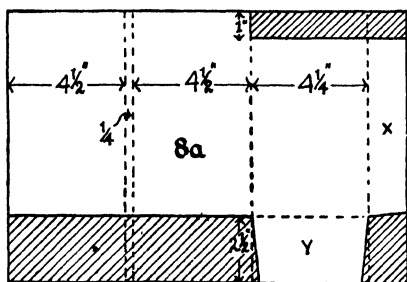
Decoration and lettering: Decorate with simple stick-printed border or corners and label margin as desired. Letter name with narrow pen.

9 POSTCARD CASE. (Left-hand bottom of Plate VIIa.)

This may be used by pupils as a case for new postcards, or for a collection of picture postcards. Similar cases may be made for cigarette cards, or for sets of cards used in children's games. For the classroom, such cases will be very useful made to fit sets of illustrative postcards, of problem cards or of mounted illustrations of standard size.

- 1 pc. thick cover paper or tinted board, Roy. 4to, $12\frac{1}{2}" \times 10"$. (To take usual postcards, $5\frac{1}{2}" \times 3\frac{1}{2}"$.)

TYPES OF CONSTRUCTIVE WORK



Steps:

- 1 Make folds along and across board as ga. The folds will need to be creased with the folder.
- 2 Cut out as gb.
- 3 Cut slot as gc. If the slot is made the shape shown in the enlarged diagram it can be cut with scissors. Pierce card with point of scissors at centre, cut outwards to ends as shown. Then cut towards centre points, making a clean slot which will hold well.
- 4 Trim other flap as gd, and refold.

Decoration and lettering: Stick-print or title only, as desired.

10 SLIP-ON READING COVER. (Centre and right-hand bottom of Plate VIIa, shown open and closed.)

This reading cover may be the property of the individual pupil, to be changed from one book to another if they are about the same size. Many junior school books are Crown 8vo, and a cover to fit this size will be generally useful. Alternatively a number of different sizes may be made, to belong to the class library and to be issued with the books.

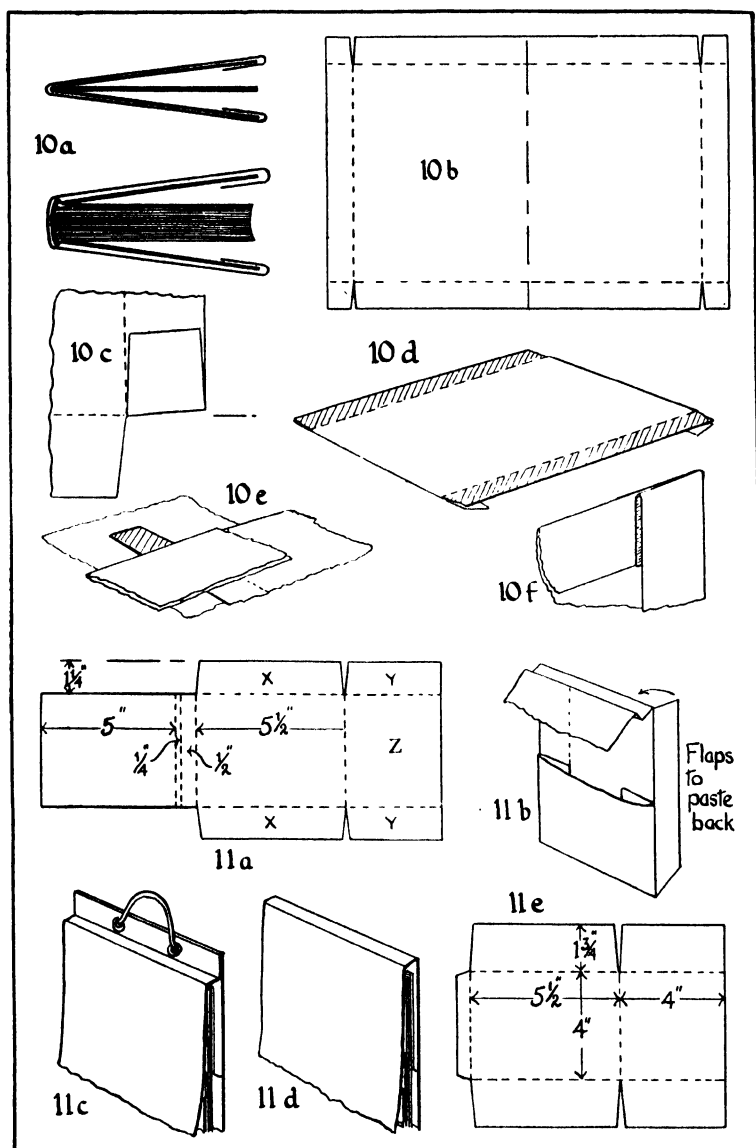
The method of making the cover varies according to whether the book it is to fit is a single-section book, up to about $\frac{1}{4}$ " thick, where a single fold will do for the back of the cover, or a thicker book with a "back" the thickness of which must be allowed for in the cover (10a).

- 1 pc. manilla paper, 80-lb. or 100-lb., Cr. folio, 15" × 10", will serve for a Cr. 8vo book. For other sizes use a sheet which will give at least 1" overlap at top and bottom and 2" at the fore-edges.

Steps. For a thin book:

- 1 Proceed as Step 1, Exercise 6 (p. 85), except that the folds should be about $\frac{1}{8}$ " outside the edges of the book. If a Cr. Folio sheet is used to cover a Cr. 8vo book the margins shown in 10b may be obtained by measurement; for other sizes it will be best to work from the book itself.
- 2 Continue as Step 2, Exercise 6, but cut as 10b. Then with ruler and folder bend the small corner flaps in *slightly* on the slant, as in 10c. If this is not done the edges of the fold may project when finally turned over and pasted down.

TYPES OF CONSTRUCTIVE WORK



- 3 Open sheet out and fold ends back (10d). Using a pasting guard, paste the shaded flaps. Again open sheet out flat, fold in and rub down the pasted flaps.
- 4 Now turn the cover over and, using guard paper, paste the small flaps at each corner (10e).
- 5 Again turn the cover over, turn in small and then large end flaps, pressing pasted parts well down. Dry under pressure, as it is most important that the small flaps should hold well. When dry the cover is ready. The appearance of the finished corner is shown in 10f.

Decoration and lettering: Stick-print if desired, especially if cover is intended for a present or for personal use. Letter with narrow pen as needed.

II SHOPPING LIST, MEMO. PAD, OR SMALL JOTTER PAD. (Three types are shown at the top of Plate VIIa.)

Each type has a replaceable pad. The first and second have permanent covers; the first to hang, the second to lie on a desk. In the third the top sheet of the pad is of stiff paper, forming the cover; it must be renewed with each pad.

The desk form of this jotter may be useful for school work; all three types make useful and attractive presents for the home—for use as shopping, laundry or milk order pads: for desk jotters, games scorers, etc.

Leaves: for all three types the cheapest pad can be made from a Crown sheet of printing paper folded 16mo, making $5" \times 3\frac{3}{4}"$. 32 leaves, *i.e.* one Double Crown sheet, makes a useful thickness for the pad.

Back of pad: 1 piece 10-oz. strawboard $5" \times 3\frac{3}{4}"$.

Cover: for the first and second types, 1 pc. 120-lb. manilla paper, Crown size, folded into 3, making $15" \times 6\frac{3}{4}"$, will make three covers. For the third type without permanent cover the back can be made from a Cr. 4to piece; in addition a small piece of thick coloured paper Cr. 16mo will be needed for the front of each pad.

A cotton tie about 6" long and two eyelets are needed for the first and third types; and for the pad in each type two paper fasteners.

Steps. The Pad (all types):

- 1 Fold each Cr. sheet 16mo, pressing folds well down.
- 2 Make the pad exactly as the jotter pad in Exercise 8, except that it is more convenient to keep the sheets as folded until fastened together, and then to slit the edges at sides and bottom. For the Third Type make the top sheet of the pad from a piece of stiff coloured cover paper or manilla paper.

Steps. The Cover, First Type:

- 1 Make folds across and along sheet as 11a, and cut as shown.
- 2 Turn the sheet over, and paste flaps XX and YY on the *back*. As the sheet lies, turn in XX and rub down. These stiffen the back.
- 3 Quickly turn the sheet over again, and turn in flaps YY with the paste uppermost, then bring the whole pocket Z up into place and press well down. The construction may be better understood from 11b. Dry under pressure.
- 4 When dry bring cover over, bend as shown, punch, fix eyelets and tie hanger (11c). The stiff back of the pad is slipped into the pocket.

Steps. The Cover, Second Type:

The steps in making this are exactly as Steps 1 to 3 for the First Type, except that only two folds are made at the top instead of three (11d).

Steps. The Back, Third Type:

- 1 Fold the Cr. 4to piece and cut as 11e. This time the narrow top flap is folded *back* and pasted down after the side flaps have been pasted down.
- 2 Proceed exactly as Step 3 for Type 1. Dry under pressure.
- 3 Punch top edge, fix eyelets, and tie hanger.

Decoration and lettering: If these pads are intended for home use the covers of Types 1 and 2 can be decorated with all-over, panel or centre-piece stick-printed patterns. The Third Type needs less decoration, but an attractive effect can be obtained by using a light-tinted manilla for the back and a dark pastel or cover paper for the front sheet of the pad. Neither of these pads is likely to require lettering.

12 CLOTH BACKED SCRAP BOOK OR ALBUM. (Top centre of Plate VIIb.)

This is the second single-section book in the series. The cover is of stiff paper; three-stitch sewing is used, and the back is reinforced and the sewing protected by a strip of cloth—the first use of cloth in the course. It may be used by small pupils for mounting pictures or cigarette cards, for snapshots, or as a pastel or crayon drawing book.

Cover: 1 piece thick cover paper or tinted board, Roy. 4to, $12\frac{1}{2}" \times 10"$. This has to be cut to $10\frac{3}{4}" \times 8"$, and there is therefore a little waste, but as the cover must overlap the pages (no edge trimming being possible at this stage) it is better to have the latter of standard size, and to waste a little on the one sheet of the cover rather than on the many sheets of the pages.

Leaves: 2 Crown sheets pastel paper folded 8vo. This gives 16 leaves. The book is slightly easier to make if only 8 leaves are used.

Back: 1 strip cloth $8" \times 2"$. About 18" of thread.

Steps:

- 1 Fold the pastel sheets to Cr. 8vo, and place one folded sheet inside the other to form one section.
- 2 Cut cover sheet to $10\frac{3}{4}" \times 8"$, and fold at centre.
- 3 Proceed as in Step 2, Exercise 4 (p. 83), except that four points are marked and pierced, as 12a.
- 4 Sew as follows:
Out at 2, in at 1, down centre and out at 3, in at 4, out again at 3, in again at 2. Pull tight and tie over middle thread (12b).
- 5 Cut strip of cloth 2" wide and exactly length of cover; fold down centre and mark fold on inside of cloth with pencil.
- 6 Paste cloth, transfer to double sheet of clean waste paper, and lay book down closed on the cloth so that back coincides with centre of cloth. Pull cloth round back with the waste paper and rub down well (12c). Dry book under pressure.
- 7 Slit folds at edges of leaves neatly with folder or blunt table knife.

Decoration and lettering: Cover may be stick printed on the paper but not on the cloth, which at this stage must be

TPYES OF CONSTRUCTIVE WORK

left plain. A label with suitable title may be lettered and a border printed round it as the specimen shown in Plate VIIb.

13 LACED MEMORANDUM PAD OR JOTTER. (Plate VIIb. centre bottom.)

Left plain this may be useful for school purposes; decorated appropriately it makes an attractive present for the home.

Leaves: Writing paper, F'cap. 4to, trimmed, $8\frac{1}{4}'' \times 6\frac{1}{2}''$.

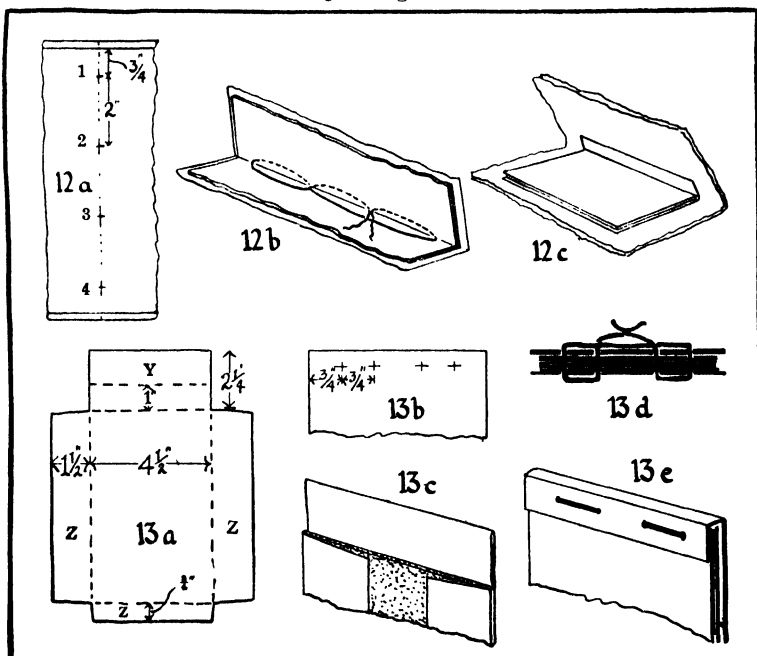
32 leaves is a useful thickness for the pad—for this

16 F'cap. 4to sheets will be required.

Back: 1 pc. 10-oz. strawboard $7'' \times 4\frac{1}{2}''$.

Cover: 2 pcs. pastel paper, Cr. 4to, $10'' \times 7\frac{1}{2}''$.

Cotton tie: about 9" long.



Steps. The Back:

- 1 Fold Cr. 4to pastel sheet and cut as 13a. Paste flap Y, turn in and rub down.
- 2 Cut 10-oz. strawboard to $7'' \times 4\frac{1}{2}''$, paste and press in position on centre of cover. Paste flaps ZZZ, turn in over board and rub down. Dry under pressure.

The Cover Flap:

- 3 Fold the edges of a Cr. 4to pastel sheet in $1\frac{1}{2}$ " all round, mitre corners (see p. 47), paste flaps, turn in and rub down. Dry under pressure.

The Pad:

Fold the F'cap. 4to writing paper sheets in half, and slit down, forming pieces $6\frac{1}{2}" \times 4\frac{1}{8}"$. Mark one sheet as 13b, and use as a pattern for piercing the others.

Assembling:

- 4 The back now appears as 13c. Place pad and cover flap in position on back, bend over top flap of back, and using same pattern as for pad, prick positions for piercing through top and cover flap. Remove pad, and pierce through card back as well.
- 5 Carefully enlarge holes where necessary, and lace as 13d, tying ends of laces at back to form hanger if desired. The finished appearance of the top of the pad is shown in 13e.

Decoration and lettering: The cover flap may be stick-printed with a panel, centre-piece or all-over pattern, preferably after it is made and before assembling. This article is not likely to require lettering.

14 SIMPLE PORTFOLIO. (Plate VIIb, bottom left-hand.)

This, the first exercise in portfolio-making, will be useful for school drawings or pictures. Junior school drawings are rarely larger than Imp. 8vo, $11" \times 7\frac{1}{2}"$; this portfolio will take this size. It will also take large exercise sheets ($10" \times 8"$), or may be used for pictures, etc. It introduces the button and cord fastener, which device may be usefully applied to other exercises.

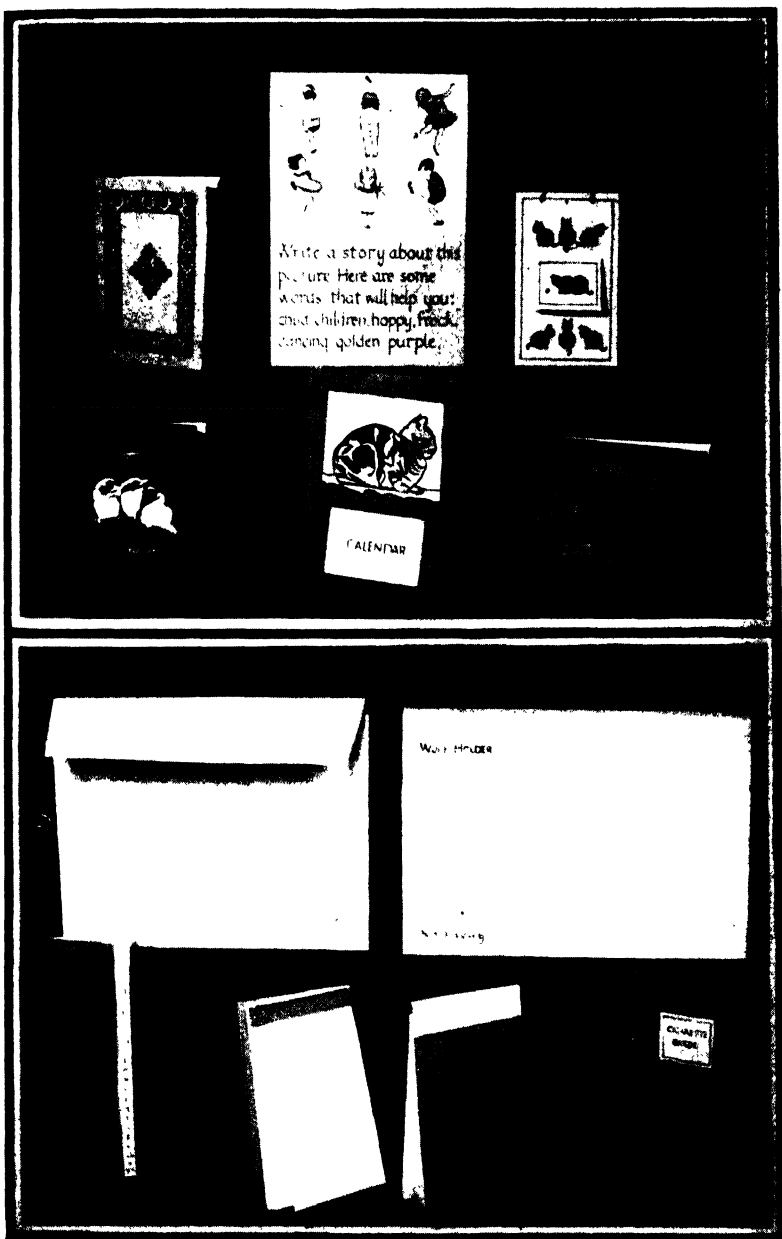
Cover: 1 Crown sheet of manilla paper, preferably 120-lb.

Board: 1 pc. 10-oz. strawboard, $11" \times 8"$.

One eyelet, a $\frac{5}{8}"$ linen button, and about 5" of knitting cotton will be required.

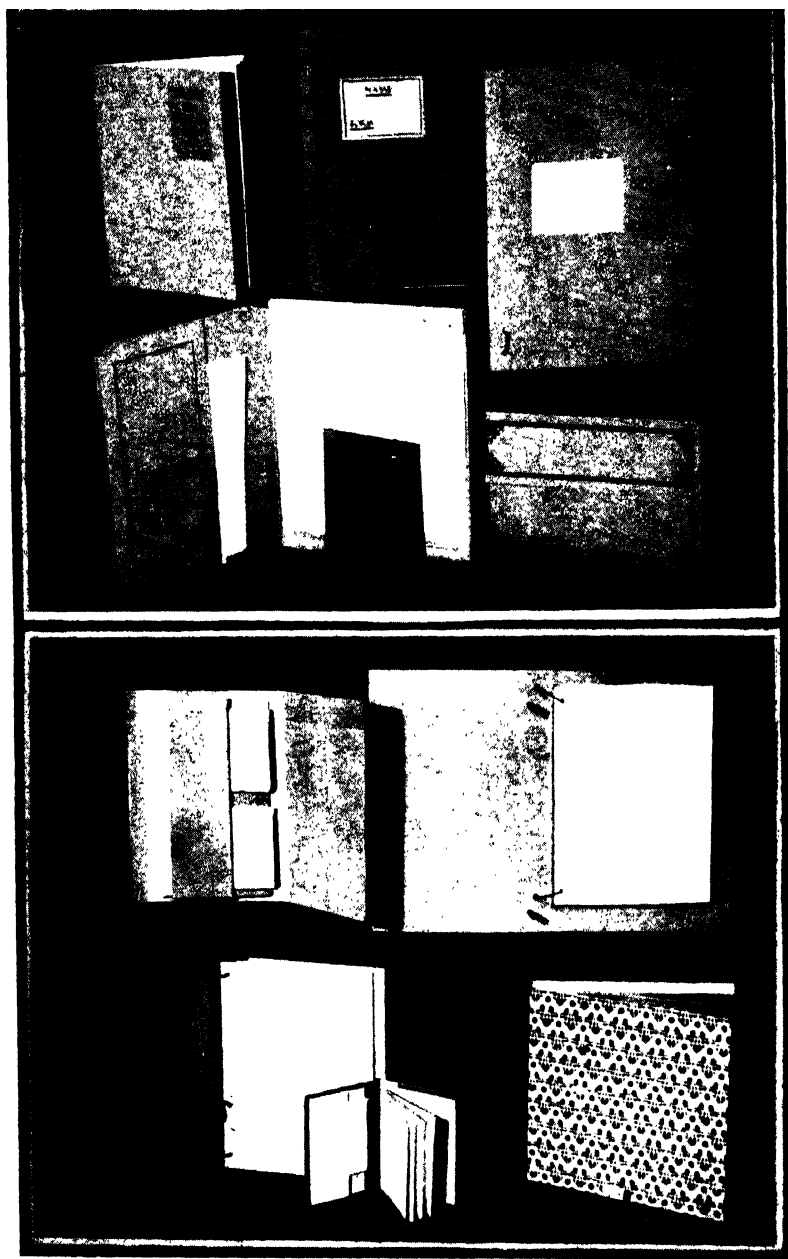
Steps:

- 1 Fold and cut sheet as 14a. Two corners are mitred; the other two cut away, and slits are cut at head and tail as shown.
- 2 Paste, turn in and rub down mitred flaps on left-hand side of cover, but do *not* paste flaps on right-hand side.



Constructive Work: Second stage

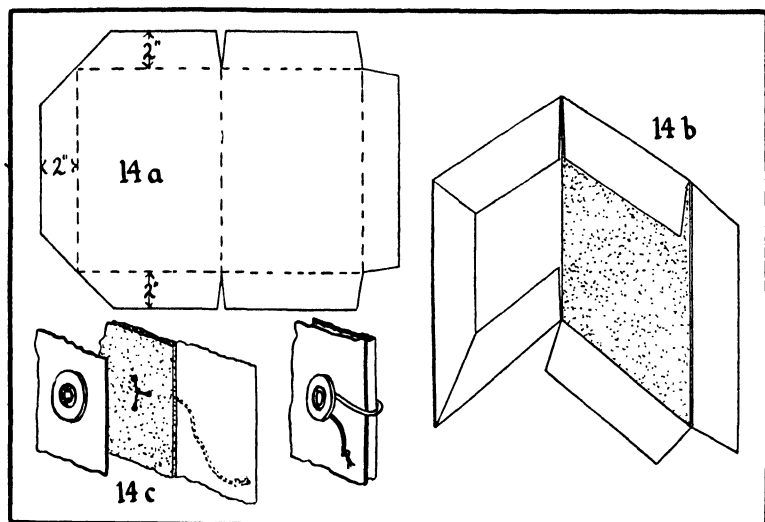
PLATE X



Constructive Work: Second stage

TYPES OF CONSTRUCTIVE WORK

- 3 Paste the strawboard and press down in position on right-hand side of cover. Turn over and rub paper well down on to board. See that no paste exudes round edges so as to stick down the flaps: if any paste gets out, carefully clean it off with a rag. The appearance of the portfolio is shown in 14b. Dry under pressure.



- 4 Punch a hole $\frac{3}{4}$ " in from fore-edge at centre of cover, and also one through a linen-covered button. Fix the button to the cover with an eyelet. Pierce the board opposite the button with three holes, and tie in about 5" of knitting cotton. Tie a knot in the free end of the cotton to prevent fraying (14c). The appearance of the fastening in use is shown in the same figure.

Decoration and lettering: This exercise will probably need little decoration, though a border or centre-piece may be stick-printed if desired. The linen button may be tinted with water-colour before fixing it, to tone with the cover. Letter title or name as required.

15 SPELLING BOOK. (Plate VIIb, bottom right-hand.)

This, the third single-section book in the series, involves two new principles: the reinforcing of the back with mull through which the book is sewn, and the fixing of the cover by means

BOOK CRAFTS FOR SCHOOLS

of the mull and of the end leaves. It also introduces four-stitch sewing. It forms a handy book for school use.

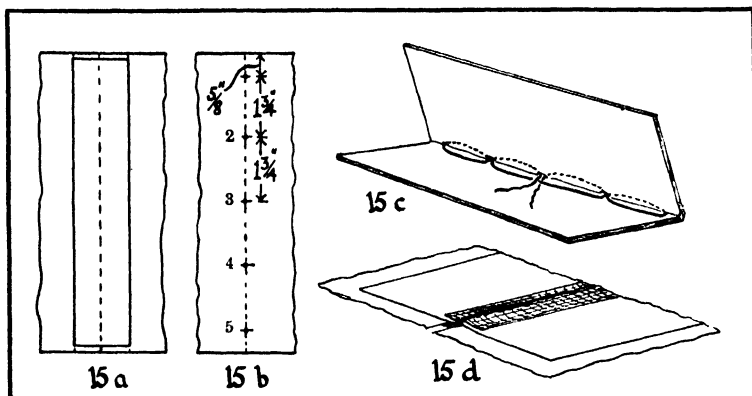
Cover: 1 piece tinted board or thick cover paper, $9" \times 7\frac{1}{2}"$. Six of these pieces can be cut from a Royal sheet ($25" \times 20"$) without much waste.

Leaves: Lined writing or exercise paper, F'cap 4to trimmed, $8\frac{1}{4}" \times 6\frac{1}{2}"$. 12 sheets of this will make a book of 24 leaves.

Mull: 1 piece $8" \times 1\frac{1}{2}"$, also about 18" thread will be needed.

Steps:

- 1 Fold the leaves to form $8\frac{1}{4}" \times 3\frac{1}{4}"$, and place all but one together to form a single section.



- 2 On the odd leaf draw a line $\frac{3}{4}"$ each side of the fold, as 15a. Cut a strip of mull $8" \times 1\frac{1}{2}"$. Paste the centre strip of the paper, rub down the dry mull upon it, and leave to dry for a time.
- 3 Cut cover $9" \times 7\frac{1}{2}"$, and fold down the centre.
- 4 Now take the dry mulled paper, fold down the centre, and place outside the other leaves of the section, so that it forms the outer leaves with the mull outside. Open the section flat, mark and pierce for sewing as 15b, and sew as follows:

Out at 3, in at 2, out at 1, in again at 2, down the middle and out at 4, in at 5, out again at 4, and in again at 3. Pull tight, and tie ends over centre thread (15c).

TYPES OF CONSTRUCTIVE WORK

- 5 Lay book open flat, face downwards, and place pasting guards under the end leaves as 15d. Paste all over the outer leaves, rubbing the paste well into the mull.
- 6 Lifting book by the unpasted leaves, place it central on the cover which is lying open on a double sheet of waste paper. With the waste paper bring the cover round the book, taking care that the mull fits well into the back. Slip clean waste papers between the covers and the unpasted leaves, close book, cover with waste paper and dry under pressure.

Note: The cover of this book may show a slight tendency to curl inwards owing to the pull of the pasted end leaves. In later work it will be seen that this is counteracted by a cover paper or cloth over the outside of the cover board. At this stage, if the end leaf is thin, the curling inwards will not be sufficient to be a serious disadvantage, and may help to prevent the thin covers curling outward in use.

Decoration and lettering: This book will require little or no decoration, but the name and title should be lettered on the front with a narrow pen.

CHAPTER 8

First Stage—Decoration and Lettering

DECORATIVE PROCESSES—Cut paper decoration—Stick printing—Printing sticks—Printing brushes—Palettes—Colours—Preparing the colour—Printing: applying the colour—Printing: making the imprint—Printing in two colours—Permanence of patterns: waterproofing—Papers for stick printing—Development of pattern in stick printing—Ruling “frameworks” for patterns—All-over patterns—Lines, borders and corners—Centre pieces—LETTERING—Narrow-pen lettering: Basic forms—Writing fluids—Pupils’ ink-bottles—Coloured writing fluids—Setting-out for lettering—Setting-out labels—Ruled lines—Placing of labels.

DECORATIVE PROCESSES

Cut paper decoration. In the very earliest stages of the work the pupils may at times be encouraged to use simple cut paper decoration—a process with which they will have become familiar in the infants’ school. As practised by young children, however, this process is likely to be crude in effect, and it is, as a rule, suitable only for large objects. More delicate work in cut paper may sometimes be applied in the later stages of book crafts, as in the calendar in Plate XIV, but it is not of sufficient general utility to justify further reference to it in this book.

Stick printing. Undoubtedly the most suitable means of decorating early book crafts exercises is by means of printing sticks. In practising this method of decoration the pupils are being introduced to a process which, in increasing complexity, is applied throughout all book crafts work, and which is the basis of all lino-block and letterpress printing.

Printing sticks. Printing sticks are small pieces of wood, usually about 3" long and of various cross sections (1). The best are made of boxwood, which is very close grained and gives an even print. Sticks made of other and more absorbent woods are likely to show the grain of the wood in the print (which may not necessarily be a disadvantage), but they are also less easy to print with, and wear badly.

Later on the pupils will learn to modify the shape of their sticks to produce imprints of their own design; at this stage they will be kept to the ready-made sticks of the simplest shapes. It is not wise to have too large an assortment; the series of shapes shown in 2, all of which are easily obtainable, will be found ample for all purposes. It is better to have a few simple shapes in sufficient numbers to go round the class than a few “sets” each of which may contain numbers of the less useful shapes.

DECORATION AND LETTERING

Printing brushes. For applying the colour to the sticks, a short flat bristle brush as shown in 3 is by far the most suitable. Although not particularly cheap it will last indefinitely if well looked after, and will be useful for occasional pasting when a small brush is required. Half-an-inch wide is a useful size. A cheaper but less satisfactory substitute may be made from a short gum brush trimmed to the shape of the better type of brush.

Palettes. 3" white earthenware palettes as used for water-colour work are needed for the printing colour. One plain palette should be used for each colour. Divided palettes taking more than one colour are to be avoided, as they are less convenient both for mixing colour with "Gloy" and for keeping colours apart, and children are likely to make a terrible mess of them.

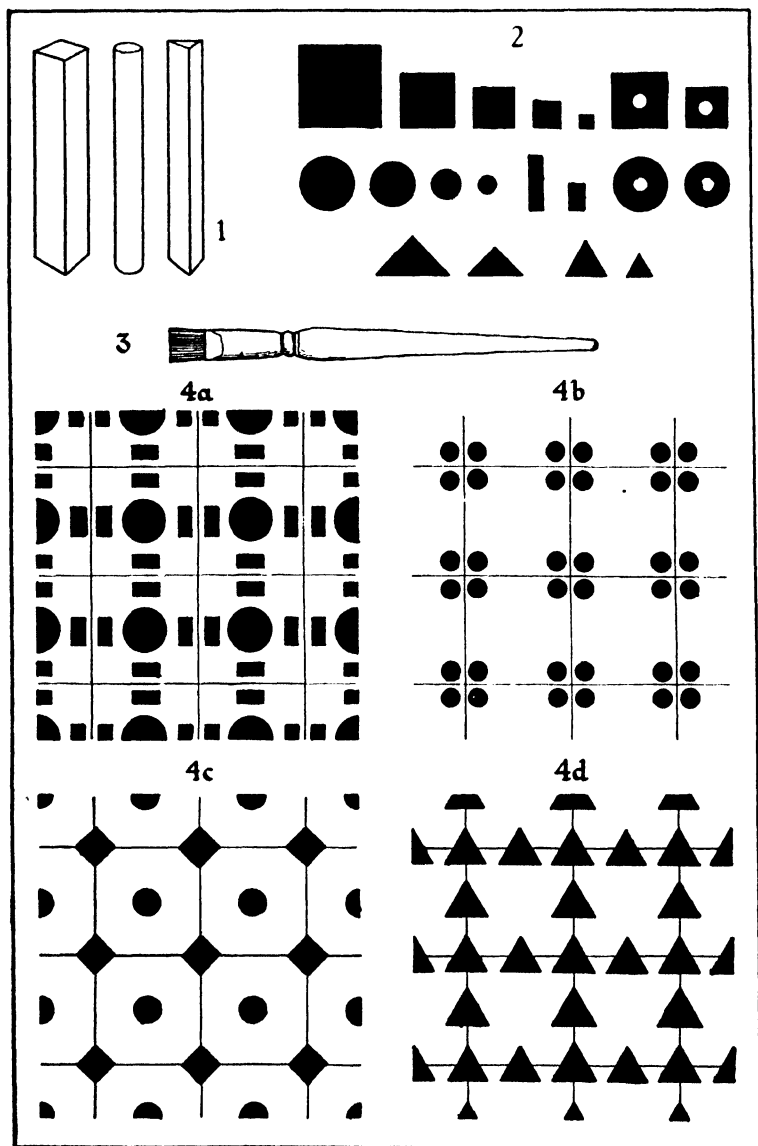
Colours. Any good make of tube water-colours of students' quality can be used for printing. It will be found that black, vermilion, Prussian blue, crimson lake, various browns, deep green and deep orange will print well, and since water must *not* be used to dilute the colours, lighter tints are made by mixing the dark colour with Chinese white. Yellows and other light colours will not "cover" well and should be avoided. However, in the early stages it will be best to use one or two simple colours and to do without mixing to obtain intermediate tints.

The colour is prepared for printing as follows: a very little water-colour (about $\frac{1}{4}$ " or $\frac{1}{2}$ " from the tube) is squeezed on to the palette, and about an equal quantity of "Gloy" paste is transferred to a clean part of the palette with the "Gloy" brush. Avoid touching the colour with the "Gloy" brush, which must be kept clean.

Now take the printing brush and with it mix the "Gloy" and colour together till the whole forms a stiff paste. Wipe the brush on the side of the palette, where most of the colour should be; that on the bottom of the palette being little more than a smear from which colour will be taken when printing.

If the colour becomes stiff during printing it may be worked up again with a little more "Gloy", but once it has really dried on the palette it is a waste of time to attempt to use it again. All brushes, palettes and printing sticks must be washed thoroughly directly after use.

Printing. With the paper to be printed resting on a pad of newspaper, take the stick in the left hand and apply a little colour to it with the brush held in the right hand (Plate VIIIa).



It cannot be too strongly emphasised that *too much colour* is the cause of most failures in stick printing, and if the brush contains much colour this should be squeezed out into a piece of newspaper held between finger and thumb before starting to print. The merest touch of colour picked up from the smear on the bottom of the palette will then suffice for printing.

Plate VIIIb shows the method of making the imprint. Beginners will probably want to lay the brush down between each printing; as soon as possible the pupils should be trained to hold the brush, when printing, between the first and second fingers of the right hand as shown, to save time. The stick is firmly pressed down and may be rocked slightly to ensure a good all-over print.

If two colours are being printed, the whole pattern should be printed with the first colour, which, if properly mixed and laid, will dry almost as quickly as it is applied. Then the second colour is printed between the units of the first, a clean palette and brush being used.

A paste other than "Gloy" can of course be used, but the fact that this paste is invariably of just the right consistency and smoothness, and that so little is required that a 10-oz. bottle will serve for many hundreds of printings, makes it well worth while to use it for the sake of convenience and the certainty of good results.

Patterns printed in this way are remarkably permanent under ordinary wear. A properly printed pattern should, when dry, stand hard rubbing without the colour coming off in the slightest degree. The foregoing method without further treatment of the patterns is, therefore, a practicable means of decoration for most objects in the early stages of book crafts.

The patterns will not, however, stand moisture, and if a printed paper is pasted at the back, as in covering work in the later stages, the paste is likely to soak into the paper and soften the colours so that they "off-set" when rubbed down.

This difficulty may be overcome, and the patterns made both waterproof and harder-wearing, by rubbing them over with a wax boot-polish or furniture-polish. For most colours a white wax polish such as white "Cherry Blossom" is excellent. A little is applied over the pattern with a rag and rubbed to a dull polish. If this is done, pasting may afterwards be attempted without fear of spoiling the prints.

Papers for stick printing. Printing with water-colour may be done on almost any paper commonly used in book crafts, but absorbent papers such as pastel will be found better to work with than smooth ones such as manilla.

Coloured rather than white paper should be used almost exclusively. Patterns which look crude and glaring on white paper are softened down and become attractive if printed on a light coloured pastel paper. Moreover, such papers are far more suitable than white ones for articles which have to be handled, as they soil much less readily.

Light coloured patterns on a dark ground are less easy to print successfully and should not be attempted until the pupils have had considerable experience in mixing and laying the colour.

Water-colours cannot be successfully used for printing on the hard surfaced varieties of bookbinder's cloth. The "dressing" in these gives them a slightly greasy surface, which can only be worked upon with printer's ink, as will be seen at a later stage.

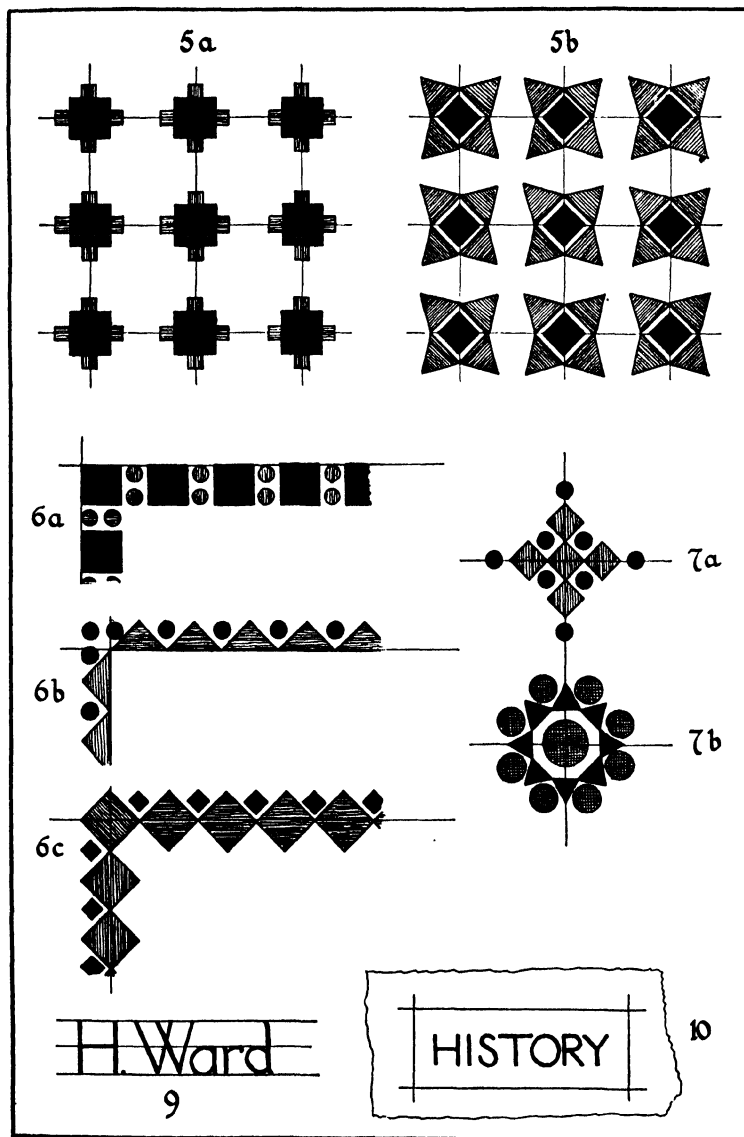
The soft matt surface cloths described on p. 21 will, however, readily "take" and retain imprints made with water-colour and "Gloy".

Development of pattern in stick printing. A study of the development of pattern from the simplest arrangements of geometrical units up to the complicated floral and other designs made possible by the use of lino-blocks, may well form part of the school training in art. The use of these patterns in the decoration of book crafts products provides a purpose and an outlet for what might otherwise be a series of formal and pointless exercises.

Such a detailed treatment of pattern design would be out of place in this book, and it is proposed to give only a few examples of those patterns which are simple and easy to produce and a few hints which may help the novice to avoid the more obvious pitfalls. Further exploration into this attractive domain of applied art must depend on the opportunities and initiative of teachers and pupils.

Since regularity and repetition are the essence of pattern design, some setting-out or "framework" will generally be needed to guide the printer in placing the units of the pattern. These frameworks consist of ruled pencil lines. They cannot afterwards be rubbed out, so that they must be ruled *faintly* and regularly, and kept down to the minimum amount which is

DECORATION AND LETTERING



absolutely necessary. If these rules are followed the framework will never mar the finished pattern—in fact it will barely be apparent at all. From the first the pupils should be trained to use their judgment in placing the units regularly and evenly with the minimum of assistance from the framework.

All-over patterns are good early exercises, and if printed on Crown 4to or 8vo pastel sheets can afterwards be used for Christmas cards, or for simple books as in Plate VIb.

The only framework necessary for such patterns is one of squares, and on a framework of 1" squares almost any simple all-over pattern can be printed. Diagonal frameworks, always a difficulty for novices, can be avoided entirely since diagonal patterns can be printed by placing the units in appropriate positions on the square framework.

The stick may be placed in the centre of each square (4a), in the corner (4b), or across lines and their intersections (4c and d), and other and smaller sticks may be alternated with the main unit.

Often small dots or squares grouped close to the larger unit will form more pleasing groups than if spaced out equally. These "satellites" may either touch or be slightly removed from the main unit (5a and b).

Alternate squares may be left blank, giving a large range of additional effects.

In general it may be said that two different sticks, and very rarely three, will suffice for any patterns likely to be printed successfully by children, and it should be constantly remembered that increasing complexity by no means involves an increase in the effectiveness of a pattern.

Lines of units, borders and corner-pieces rarely need more than one pencil line. Before attempting a border round a rectangle, experiments should be made in the turning of the corner (6, a, b and c). If the units of the border are to touch each other nothing more than the single line will be needed for setting-out, provided that the unit goes an exact number of times into the length of each side of the border rectangle, but if they are to be spaced out, a series of tiny pencil marks must be made at equal distance along the ruled line, otherwise the border may not fit the space for which it is intended. When printing a border it is a good plan to start with the middle unit and work outwards, printing the units alternately on either side of the centre, until the corners

DECORATION AND LETTERING

are reached. Thus any slight inaccuracy in calculating the spacing of the units will be equally distributed on each side.

Centre pieces are best printed by first making the centre unit, which is placed on the intersection of the diagonals of the space to be decorated. Other units are then grouped round the centre as "satellites" until the desired group is obtained (7a and b).

Plate IX shows four patterns based on the foregoing simple principles.



LETTERING

As with pattern design, lettering may form part of the art training of the school, in which case its relation and successful

application to book crafts exercises will be a simple matter. But even if this is not so, much may be done in book crafts to train the pupils in the use of well-formed, if simple, lettering for titles, names and similar "display" purposes, and to get them to use discrimination and taste in labelling and naming their work.

Basic forms. Most children nowadays are accustomed to "script" writing and will find little difficulty in making letters of the type shown in 8 with an ordinary steel writing pen. These letters have the same basic forms as the broad-pen lettering of the later stages (see 12, p. 167) which, as far as the capitals are concerned, are derived from the Roman lettering shown in 9, p. 191. These forms are acknowledged to be the finest letters the world has known. Thus by using the correct forms in their simple narrow-pen lettering the pupils are getting valuable preparation for more advanced work.

Writing fluids. Even if the early lettering of the book crafts course varies little from the pupils' normal "script" writing, a great improvement in its appearance can be effected by using a jet-black writing fluid instead of the blue-black ink commonly used for school written work.

Fixed Indian ink such as is used by draughtsmen is best, but is too costly for general school use. There are cheaper substitutes on the market in the form of "manuscript" inks, but these also will be found expensive for large classes. Excellent results, however, can be obtained with Stephens' Ebony Stain, of which a 10-oz. bottle, costing about 1s. 3d., will go a very long way if carefully distributed.

1-oz. or 2-oz. wide-mouthed bottles, which can be obtained cheaply, with corks to fit, at any chemist's shop, are excellent for holding the stain, which can thus be "doled out" in small quantities for pupils' use. If the bottles are kept corked when not in use the stain will remain fit for use indefinitely, but it should *not* be kept in open inkwells.

For writing in colours waterproof drawing inks are the best, but again are too costly for general use. For occasional coloured labels, titles, initials, ruled lines, etc., water-colours diluted to the required consistency can be used. A little "Gloy" added to the colour will lessen the risk of it "spreading" or forming a blot on absorbent paper. The pen must be well wetted with the fluid before writing.

DECORATION AND LETTERING

Setting-out for lettering. Until considerable skill in lettering is acquired, pupils should invariably use pencil lines both at top and bottom of their lettering, adding a third line if there are several capitals and "risers" to be written (9). If very faintly drawn these lines may be left without erasing, as papers such as pastel and manilla will not stand the indiarubber. Lettering on drawing or writing paper can have the lines removed with a soft indiarubber *after the ink is thoroughly dry*.

Lettering to fill a given space should be lightly sketched in with pencil before inking.

Labels, unless specially designed to fit a given space (in which case the lettering is designed to fit the label), should always take their size from the lettering upon them. Consequently a label should always be written upon a piece of paper larger than the finished label is likely to be, and the rectangular outline of the label afterwards drawn round the lettering (10), using the method for drawing a rectangle described on p. 45. The label is then cut out with scissors, or, at a later stage, with knife and straight-edge.

Generally, labels look best with approximately equal margins both above and below and at each end of the lettering, though occasionally a wider margin at the bottom is preferable.

A ruled line round a label, and occasionally in other positions on book crafts exercises, may be an effective and simple means of decoration, as on the stationery case shown in Plate XIa. In the earlier stages this ruling can be done exactly as ruling is done in ordinary written work, using a writing pen and a reversed bevelled ruler; later on more accurate work may be done with a draughtsman's ruling pen. Ruling round a label should be set out accurately in pencil and inked before the label is cut out.

The effect of a label or title upon a book crafts exercise may make or mar the appearance of the finished object according to the position in which it is placed. Thus labels before pasting should always be laid on the work and moved about until the best position is decided upon. They are as a rule less effective if placed too near the edge of a book or cover. A study of the Plates showing finished work in this book will reveal some of the possible variety of effective positions in which labels may be placed.

CHAPTER 9

Second Stage—Types of Constructive Work

CHRISTMAS CARDS—Cutting “windows” with scissors—CALENDARS AND MOUNTING EXERCISES—LARGE WORK ENVELOPE WITH SINGLE PLEAT—WORD BOOK WITH FULL CLOTH COVER—COVERED WORK PAD WITH POCKET—CIGARETTE CARD ALBUM—DESK MEMORANDUM PAD: BOARD COVERS—CHILD’S STATIONERY CASE—LACED EXERCISE BOOK AND MANILLA TAGGED FILES—POCKET BOOK—REBOUND SINGLE-SECTION BOOK: PAPER COVER, TRIMMED EDGES—LACED ALBUM WITH OPEN BACK

I CHRISTMAS CARDS.

Two of the three Christmas cards suggested for this stage are similar in size and construction to Type A (p. 79). The one at the left-hand top of Plate Xa is different only in that it is decorated with an easy filed-stick pattern in one colour.

The one at the left-hand bottom of Plate Xa is rather more complicated. Cover and leaves are as Type A, but two folded leaves instead of one are used. On the first leaf is mounted a picture, which is seen through a hole or “window” in the cover. This “window” effect is also used in Type D below.

Cutting “windows” with scissors. The shape of the “window” is first set out. For a round opening, the scissors are pushed through well inside the circle, and the cut is made as 1a.

A square or oblong opening is more difficult to cut, and pupils often fail because they attempt to turn the corners with the scissors, and tear the paper as a result. The method of cutting such an opening is shown in 1b. The scissors are inserted near the centre, and cuts are made successively into the four corners. When the middle piece falls out the second cut to complete each corner is made. In all similar exercises, if it is remembered to cut *into* the corner from both directions, and never to follow round the corner with the scissors, little difficulty will be experienced in cutting even complicated shapes.

Envelopes for these cards are as for Type A.

Type D. (Right-hand bottom of Plate Xa.)

This type takes a picture postcard, which is mounted on the first leaf and is seen through the “window” in the cover. A heavier cover than pastel paper is needed for this size.

Cover: 1 piece thick cover paper or tinted board, Roy. 4to, $12\frac{1}{2}'' \times 10''$, folded lengthwise and slit to make $12\frac{1}{2}'' \times 5''$; i.e. 1 Roy. 4to will make two covers.

TYPES OF CONSTRUCTIVE WORK

Leaves: A fairly stiff inner leaf will be needed for this size. The piece required is $12" \times 4\frac{1}{4}"$; five of these can be cut without much waste from an Imp. folio sheet of drawing paper ($22" \times 15"$); or two can be cut from a Roy. 4to piece of cover paper; or five can be cut from a Cr. sheet ($20" \times 15"$) of cream or light grey pastel paper. This is not a very economical card to make from the usual paper sizes; but the postcard dictates the size.

Postcard for mounting; cotton, silk or ribbon tie about $12"$ long.

Cut cover and leaf, each to $12" \times 4\frac{1}{4}"$. It will probably be advisable to cut the leaf a little shorter than the cover. Fold each.

Set out "window" on front of cover, size according to the amount of the postcard it is desired to show. Cut window as 1b. Mount postcard on leaf; when dry assemble and tie. Letter as required on second leaf.

Envelope for Type D.

Proceed exactly as for Type C envelope (First Stage, p. 81). This card, being rather shorter than Type C, will allow of wider top and bottom flaps for the envelope.

2 CALENDARS AND MOUNTING EXERCISES.

All three types are different from those given in Stage 1, but Type D differs from Types A and B, and Type E from Type C, only in size. Type F involves the first exercise in the covering of boards. This kind of exercise may be put to school use in the making of work cards for composition, arithmetic problems, etc., such as are used widely by the younger children. It is a good plan for a class of nine-year-olds to make such cards for the use of their brothers and sisters in the lower classes.

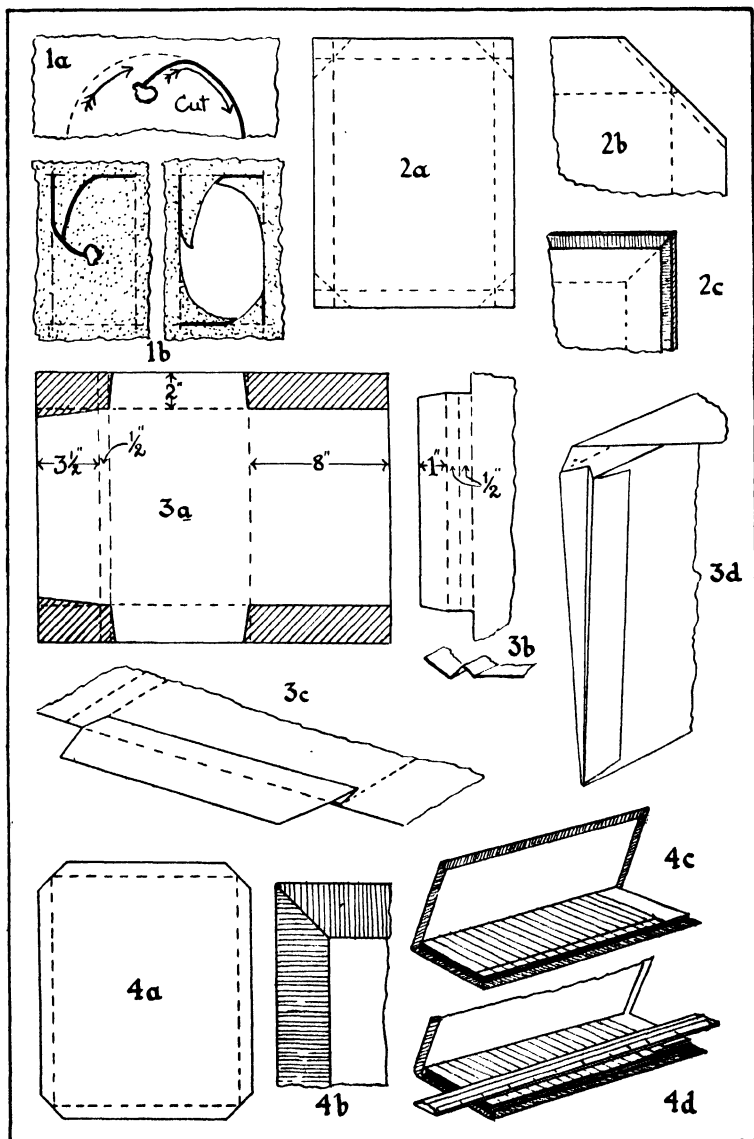
Type D. (Right-hand top of Plate Xa.)

1 pc. tinted board or thick cover paper, Roy. 32mo, $5" \times 3\frac{1}{8}"$.

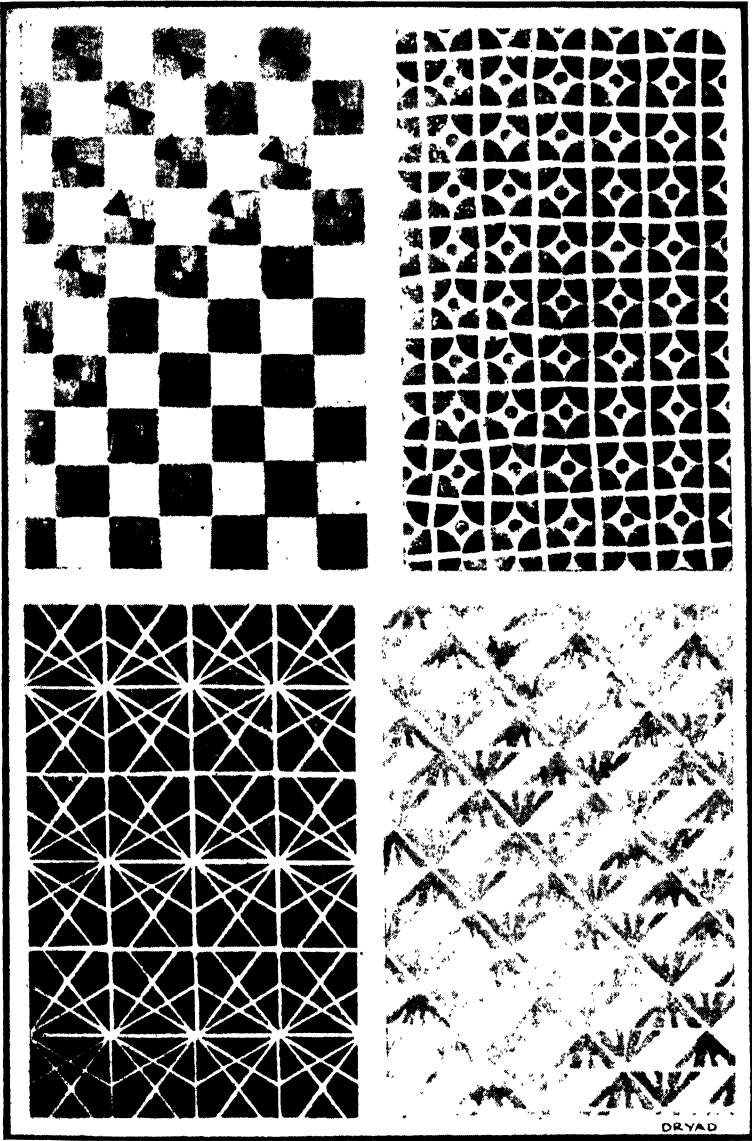
Small calendar, and about $4"$ of cotton, silk or ribbon tie.

The construction is exactly the same as for Types A and B (p. 81).

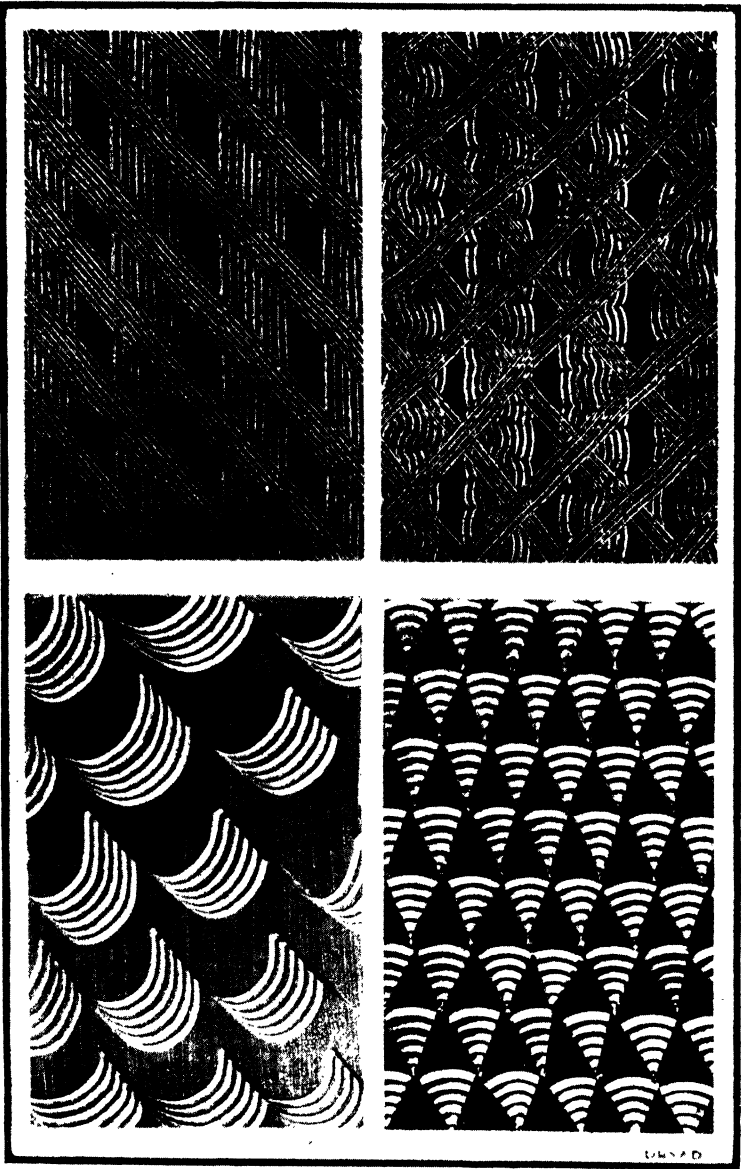
BOOK CRAFTS FOR SCHOOLS



Stick-printed Patterns: a, double printed with plain sticks



Stick-printed Patterns: b, c, d, printed with filed sticks



Paste-colour Combed Patterns

PLATE XIII

TYPES OF CONSTRUCTIVE WORK

The calendar in Plate Xa is decorated with animal forms made by combining the forms of four simple sticks. It is a development of stick-printing which is very attractive to children, and with which experiments may well be made in the decoration of other calendars, Christmas cards, etc.

Type E. (Centre bottom of Plate Xa.)

1 pc. tinted board or thick cover paper, Roy. 4to, $12\frac{1}{2}" \times 10"$, divided lengthwise will make two calendars, each piece being $12\frac{1}{2}" \times 5"$.

1 pc. 10-oz. strawboard, $6\frac{1}{4}" \times 4\frac{3}{4}"$.

Small calendar, and picture for mounting.

The construction is exactly the same as for Type C (p. 82).

Type F. (Centre top of Plate Xa.) School composition card.

Board: 1 pc. 10-oz. strawboard, $8\frac{1}{2}" \times 6"$. This size will just be covered by a Cr. 4to cover paper, allowing $\frac{3}{4}"$ turn-overs all round.

Cover paper: 2 pcs. pastel paper, Cr. 4to, $10" \times 7\frac{1}{2}"$. If writing is to be put on the front, choose a cream pastel, or use Imp. 8vo drawing paper.

Steps:

- 1 Mark out and cut strawboard exactly to size, $8\frac{1}{2}" \times 6"$.
- 2 Lay the board on the centre of one piece of pastel paper, so that there is $\frac{3}{4}"$ margin all round. Fold the edges of the paper in. Remove board, flatten folds, and fold in corners to form mitre lines (2a). For further details of the method see p. 47. Cut the corners off for mitreing, allowing for thickness of card outside of diagonal fold (2b).
- 3 Cover the board with this paper, mitreing the corners and using throughout the method given on pp. 68-9.
- 4 Cut the other piece of pastel paper to form a lining, $\frac{1}{8}"$ smaller all round than the board, and paste it in place, rubbing well down. Dry under pressure. The finished appearance of one corner of the card is shown in 2c. Either side of the board may be regarded as the front: if the lining side is used, and a darker paper used for the back, the effect will be that of a neat and narrow dark margin at the front.
- 5 Mount the picture and write the necessary lettering with narrow pen and *black* writing fluid (see p. 108).

- 3 **LARGE WORK ENVELOPE WITH SINGLE PLEAT.** (Plate Xb, top, in which front and back of the envelope are shown.)
1 pc. manilla paper, Crown (20" × 15") 100-lb. or 120-lb.

Steps:

- 1 Fold the sheet as 3a, and cut away shaded parts.
- 2 Make additional folds in each side flap as 3b and cut the ends of the outer flaps on the slant. Note that the centre fold is made inwards, as in the small diagram.
- 3 Fold envelope with pleats inside and flaps open as 3c, and using pasting guard, paste both flaps.
- 4 Transfer envelope to double clean waste paper, pull over flaps, and rub well down. The appearance of one side of the finished envelope is shown in 3d.

Decoration and lettering: The envelope may have a little stick-printed decoration; and the name, etc., should be lettered with a narrow pen.

- 4 **WORD BOOK WITH FULL CLOTH COVER.** (Plate Xb, left-hand bottom.)

This is similar in construction to the Spelling Book of Exercise 15, First Stage (p. 97), but is an advance on it in that: (a) a coloured end leaf is used; (b) the cover is composed of manilla paper covered with cloth, forming a strong "semi-stiff" cover; (c) the fore-edge of the leaves is trimmed (the first exercise in trimming) and afterwards indexed. If a rather easier exercise is required, omit the trimming and indexing.

The book will be very useful for school purposes; for spellings, for a vocabulary book, etc.

Cover: 1 pc. 80-lb. manilla paper, Cr. 4to, 10" × 7½".

Cloth: 1 pc. cloth, 9¾" × 8".

Mull: 1 pc. 8" × 1½".

Leaves: 11 sheets ruled exercise paper, F'cap. 4to, trimmed, 8¼" × 6½".

End leaf: 1 pc. pastel paper, Cr. 4to, 10" × 7½".

About 18" thread for sewing.

Steps:

- 1 Proceed as Steps 1, 2 and 4 of Exercise 15 (p. 98), using the pastel sheet, first cut to 8¼" × 6½", as the outer leaf to be mulled.

TYPES OF CONSTRUCTIVE WORK

- 2 Trim fore-edge in trimming press, using knife or chisel, as described on p. 57. (This step may be omitted if the book is not to be indexed.)
- 3 Cut manilla paper to $8\frac{3}{4}" \times 7"$, and cloth to $9\frac{3}{4}" \times 8"$. Lay paper on centre of cloth, with $\frac{1}{2}"$ margin all round: mark round the paper with pencil on the cloth. Remove paper, mark mitres by folding (p. 47), and cut off corners. The cloth now appears as 4a.
- 4 Paste the cloth, and lay it on a double sheet of clean waste paper. Place the manilla paper correctly in position, press down, and bring over the cloth overlaps by lifting them with the waste paper. Do the head and tail overlaps first, then the two fore-edges (4b). Dry cover under pressure.
- 5 When cover is dry, proceed to fix it on the book exactly as in Steps 5 and 6 of Exercise 15 (p. 99).
- 6 Indexing: If the book has been trimmed, open and draw a line on the first page $\frac{3}{8}"$ from the edge, and reaching from the bottom of the page to the top ruled line (4c). Cut this strip out with scissors. Now, holding the top page down with a ruler, use this cut edge to mark a line on the *second* page, this time reaching from the bottom to the second line of the ruling. Cut the piece from the second page, and repeat with the third and subsequent pages (4d), each time using the cut pages as a guide for the next page below them, and using the lines of the ruling to give the lengths of successive pieces to be cut out.

A neater but more difficult way of cutting the index is to use knife and straight-edge. In this method only the top page need be marked with pencil; the rest of the pages are cut one by one as shown in 4d, except that a piece of card is inserted behind each page as it is cut to act as a cutting board.

If 11 sheets of ruled paper have been used in the book, this will make 22 pages, and the common "writing" ruling on F'cap. 4to has 22 lines. Thus the lines can be used as the lateral divisions of the index, the last page not being cut at all. The alphabet can be written on the 22 divisions of the index, one letter per page except that i and j, v and w, and x, y, z, are grouped.

The method applies to the cutting of any index, except that it may not always be possible to depend upon the rulings for the lateral divisions; in which event the divisions must be measured and marked with pencil.

5 COVERED WORK PAD WITH POCKET. (Plate XIa bottom left-hand.)

This is a useful cover for school written work. It holds F^cap. 4to sheets of writing paper, the usual exercise book size, and has a pocket for odd sheets, notes, blotting-paper, etc. It also makes a simple and attractive correspondence pad for home use if filled with plain sheets of writing paper. It is the first example of a mounted pocket in the course, and introduces also the principle of reinforcing the back fold by means of mull, though no cloth is used on the back.

Boards: 2 pcs. 10-oz. strawboard, $8\frac{3}{4}" \times 6\frac{3}{4}"$.

Cover: 1 pc. 80-lb. manilla paper, Cr. folio, $15" \times 10"$.

Lining and pocket: 1 pc. 80-lb. manilla paper, Cr. folio, $15" \times 10"$. This piece will also make the hinge lining.

Pad lining: 1 pc. 80-lb. manilla, Cr. 4to, $10" \times 7\frac{1}{2}"$.

Mull: 1 pc. $8\frac{1}{2}" \times 1\frac{1}{2}"$.

Steps. The Cover :

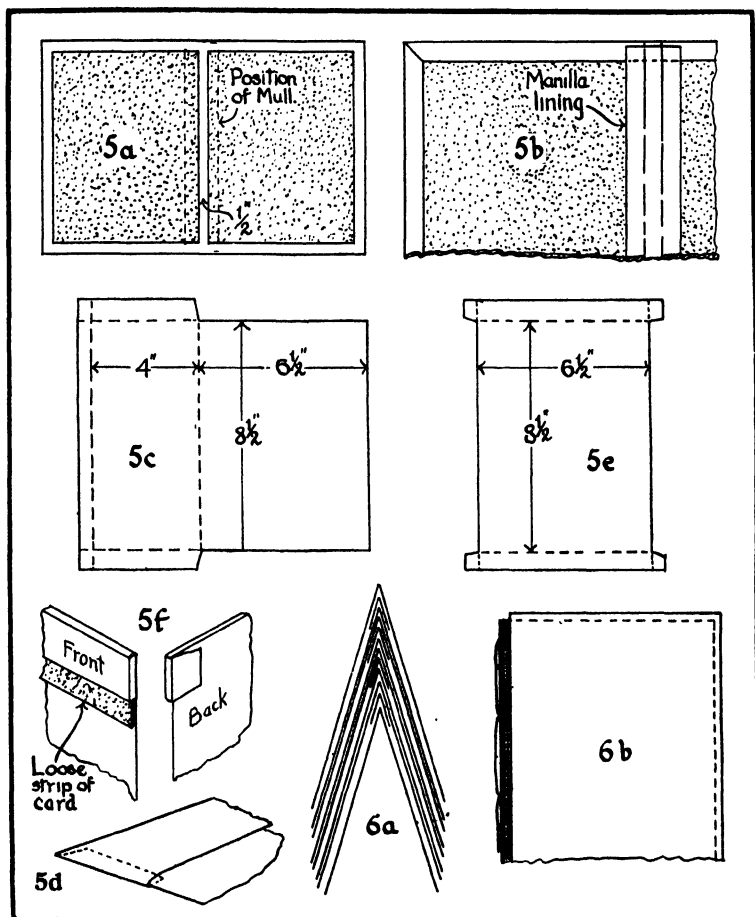
- 1 Cut boards to $8\frac{3}{4}" \times 6\frac{3}{4}"$, and cover paper (manilla) to $15" \times 9\frac{3}{4}"$. Mark a strip $1\frac{1}{2}"$ wide down centre of inside of cover paper. Lay boards on cover paper in position (5a), mark round them, and mark and cut cover paper for mitres. (Allow for thickness of card in this.)
- 2 Paste the cover paper, transfer to a double sheet of clean waste paper, and lay the dry mull in position in the centre. Have paste-brush ready to paste over the top of the mull, then lay boards in position, press down, turn in overlaps at head and tail and rub down, tuck in mitres, and turn in overlaps at fore-edges. Line the hinge with manilla paper. The cover now appears as 5b. Dry under pressure.

The Pocket and Pad Lining:

- 3 On the sheet of 80 lb. manilla provided for the pocket lining, mark and cut a piece $11" \times 10"$, fold and cut as 5c. Paste and turn in $\frac{1}{2}"$ at edge, to strengthen edge of pocket. Complete pasting and assembling of pocket as 5d. Dry under pressure.

TYPES OF CONSTRUCTIVE WORK

- 4 Cut the Cr. 4to piece provided for the pad lining as 5e, making folds at dotted lines. Assemble the narrow top and bottom pockets as 5f. Dry under pressure.



Assembling:

- 5 Paste the backs of the pocket and pad linings, and set them in position. Rub down well and dry under pressure, putting loose strips of card in the pad pockets while pressing.

When dry fill the pad with F'cap. 4to trimmed writing or exercise paper.

Decoration and lettering: The example in Plate XI is very simply decorated with coloured ruled lines on the pocket and on the pad pockets. This "sets off" the article even for school use. For home use stick-printed decoration might be added to the cover. Letter front with suitable title, name, etc.

6 CIGARETTE CARD ALBUM. (Plate Xb, right-hand bottom.)

In this, the next stage in single-section book making, thick tinted boards are used for the cover, pasted on to the end leaves and mull. The back is reinforced by a strip of cloth, stubs are introduced between the leaves, and the head and tail may be trimmed as well as the fore-edge. If the edges are left untrimmed the boards and the cloth back should be $7\frac{3}{4}$ " long instead of $7\frac{1}{2}$ ". It may be used as an album for photographs, pictures, etc.

Boards: 2 pcs. thick cover paper or tinted board, $4\frac{3}{4}$ " \times $7\frac{1}{2}$ ". (If only a thin board is available, a suitable thickness may be made by pasting two pieces together and drying under pressure.)

Mull: 1 pc. $7"$ \times $1\frac{1}{2}"$.

Cloth: 1 pc. $8"$ \times $2"$.

Leaves: 8 sheets pastel paper, Cr. 4to, $10"$ \times $7\frac{1}{2}"$.

Stubs: from 1 sheet pastel, Cr. 8vo, $7\frac{1}{2}"$ \times $5"$, same colour as leaves.

About 15" thread for sewing.

Steps. The Leaves:

- 1 Fold each of the leaves across the middle; cut four strips $7\frac{1}{2}"$ \times $1\frac{1}{2}"$ to form stubs; fold these, and place leaves and stubs together to form a single section as 6a. The outer leaf is mulled on the back.
- 2 Pierce and sew through leaves, stubs and mull with four-stitch sewing as Exercise 15, First Stage (p. 98).
- 3 If desired, trim fore-edge, head and tail of the "book" thus made in the trimming press.
- 4 Placing a pasting guard beneath the first leaf, paste it all over and carefully set the front board so that the "squares" (margins or overlaps) at head, tail and fore-edge are equal. The board will thus be set in about $\frac{1}{4}"$ from the back to allow of free opening of the book (6b).

TYPES OF CONSTRUCTIVE WORK

Repeat with the back board, taking care that the two boards align exactly with one another.

- 5 Cut the cloth strip to 2" wide and 8" long, or $\frac{1}{2}$ " more than the length of the boards. Mark the centre of the strip by folding or measurement.
- 6 Paste the cloth, transfer to double clean waste paper, and fix as in Exercise 12, First Stage (p. 94), but turning in the extra $\frac{1}{4}$ " of cloth at head and tail. Dry book under pressure with waste sheets inside covers and round the back.

Decoration and lettering: Make a suitable stick-printed design for the cover; letter and fix an appropriate label, writing in colour.

- 7 **DESK MEMORANDUM PAD: BOARD COVERS.** (Plate Xb, bottom centre, shown open and closed).

This is the first example in the course of a quarter-bound case, with cloth back and paper-covered board sides. One lining is made in the form of a pocket into which is slipped the stiff back of a pad with detachable sheets, which is made by pasting instead of by the cruder but easier method of using paper fasteners, as in the First Stage.

Boards: 2 pcs. 10-oz. strawboard, $6\frac{3}{4}" \times 4\frac{1}{2}"$.

Cloth: 1 pc. $9\frac{3}{4}" \times 2\frac{1}{2}"$ will make back and lining.

Cover papers: 2 pcs. are needed, $6\frac{5}{8}" \times 6"$; these two can be cut without much waste from one-third of a Crown ($20" \times 15"$) sheet of pastel paper, *i.e.* one Crown sheet will serve for three pupils.

Pad lining: 1 pc. pastel paper, Cr. 4to, $10" \times 7\frac{1}{2}"$.

Plain lining: 1 pc. pastel paper, Cr. 8vo, $7\frac{1}{2}" \times 5"$.

Pad: Leaves—F'cap. 4to trimmed, folded in half and cut. 32 leaves, *i.e.* 16 F'cap. 4to sheets, make a pad of suitable thickness.

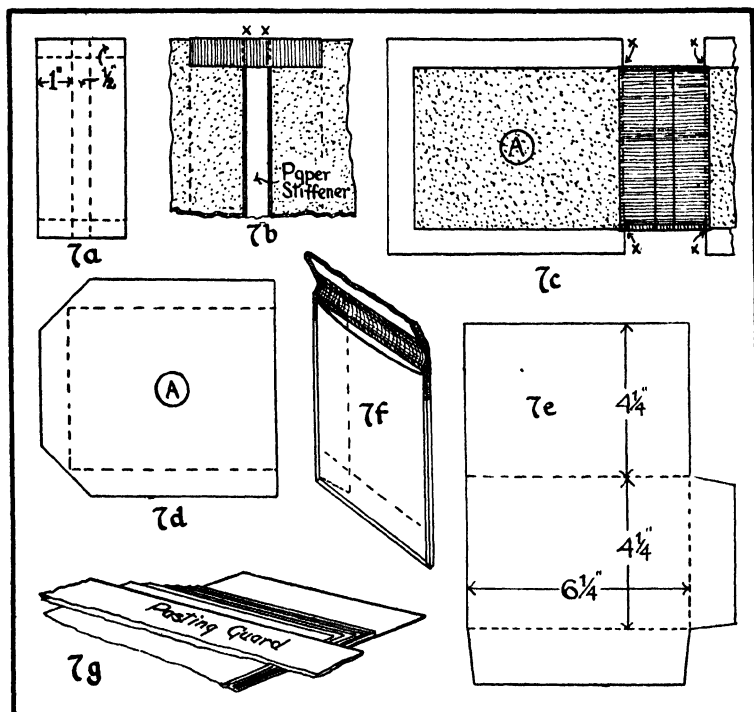
Back: 1 pc. 10-oz. strawboard or tinted board, $6\frac{1}{2}" \times 4\frac{1}{8}"$.

Steps. The Cover.

- 1 Cut boards to $6\frac{3}{4}" \times 4\frac{1}{2}"$, and cut a strip of cloth $5\frac{1}{2}" \times 2\frac{1}{2}"$. Mark the cloth as 7a. Cut also a strip of pastel or thin manilla paper $4\frac{1}{2}" \times \frac{1}{2}"$ to stiffen the back.
- 2 Paste the cloth, transfer to clean double waste paper, lay boards in position and press down; lay the strip of paper between the boards, and turn over and rub down cloth at head and tail, taking care to work it well into the corners at points XX in 7b.

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- 3 Cut cloth lining strip, $2\frac{1}{2}" \times 4\frac{1}{4}"$, paste, and line back (see p. 70).



- 4 Cut two pieces of pastel paper $6\frac{5}{8}" \times 6"$. Mark the inside of the cover at points XX (7c), which are $\frac{1}{8}"$ from edge of cloth. Now lay the cover down, with the cover papers (wrong side up) in position as 7c, the inner edges coinciding with the pencil marks. Run a pencil round each board, marking the cover papers, and use a set-square to mark the mitres. Mark the boards "A" and "B" or some other way to distinguish them: remove boards and mark corresponding cover papers similarly.
- 5 Cut the corners for the mitres. Each cover paper will then be as 7d.
- 6 Paste a cover paper, transfer it to a clean double sheet of waste paper, lay the corresponding board upon it exactly in position, and complete covering as described on pp. 68-9. Repeat with the other cover paper. Dry under pressure.

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The Linings:

- 7 Cut plain lining to size from Cr. 8vo piece, and line one board as described on pp. 69-70.
- 8 Fold the Cr. 4to piece as 7e, and cut to shape. Paste bottom and side flaps, using pasting guard; bring front of pocket over and rub down flaps.
- 9 Paste the pocket all over the side where the flaps are, and mount inside cover as the lining for the second board (7f).

The Pad:

- 10 Fold and cut 16 F'cap. 4to trimmed sheets to size, $6\frac{1}{2}'' \times 4\frac{1}{8}''$. Cut a piece of strawboard to the same size, and cut a strip of pastel paper $4\frac{1}{8}'' \times 1\frac{1}{2}''$.
- 11 Paste this strip, lay it on a sheet of clean waste paper, and upon it lay the sheets of the pad with the strawboard beneath, as in 7g. With a small brush rub paste well into the ends of the leaves; then straighten them up, and draw the paper strip round and rub down well. Do not disturb the sheets more than you can help until the pad is quite dry. This method will hold the sheets together while they are in the pad, yet the topmost sheet can easily be detached. The method gives surer results if glue is used, but will answer satisfactorily with paste providing it is done carefully.
- 12 When the pad is dry the strawboard back should be tapered slightly so as to slide easily into the pocket of the cover. If this is done before pasting the pad it may cause some little difficulty in aligning the sheets and the strawboard.

Decoration and lettering: The cover papers may be stick-printed with an all-over pattern before fixing, or with a border, centre-piece, etc., after fixing. This exercise is not likely to require lettering. The example in Xb is printed with filed sticks.

- 8 CHILD'S STATIONERY CASE. (Plate XIa, right-hand bottom, shown closed; Plate XIb, left-hand top, shown open.)

This is a most attractive exercise, being designed to hold the tiny notepaper and envelopes which are sold for children, and which can be very cheaply obtained, *e.g.* at Woolworth's. The case and the two mounted pockets are made entirely of tinted manilla paper.

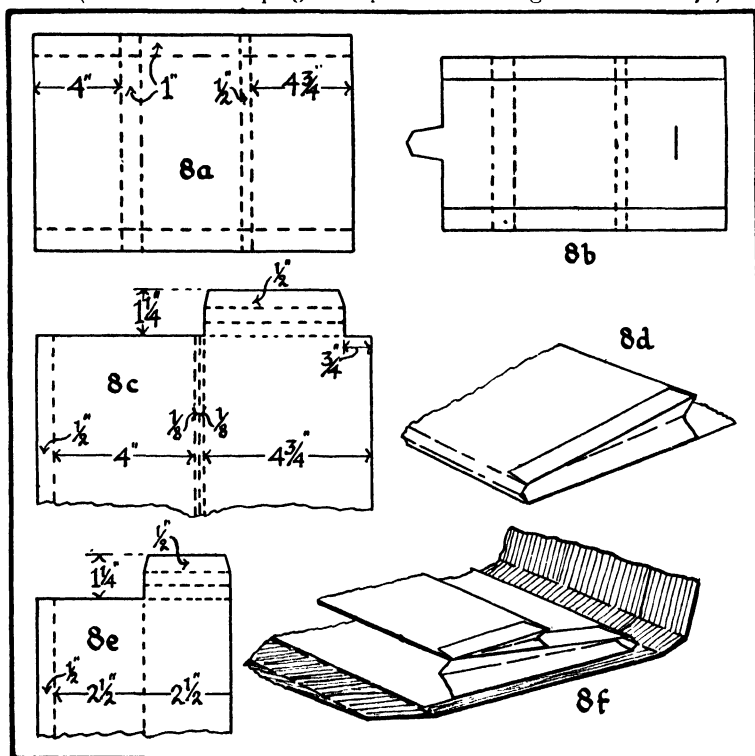
BOOK CRAFTS FOR SCHOOLS

Case: 1 sheet 120-lb. manilla paper, Cr. folio, 15" × 10".

Pockets: 1 sheet 80-lb. manilla paper, Cr. folio. This should preferably be of a different colour to the case.

Steps. The Case:

- 1 Fold the Cr. folio sheet of 120-lb. manilla as 8a; paste and turn in the 1" flaps and rub down. Dry under pressure. (Go on with Steps 3 and 4 while waiting for this to dry.)



- 2 When dry, cut out the sheet to shape as 8b. The slit for the fastener may at this stage be cut with a knife; or if preferred may be cut with scissors as in the Postcard Case in the First Stage (p. 88).

The Large Pocket:

- 3 From the sheet of 80-lb. manilla cut a piece 10" × 9 1/2", and cut and fold it as 8c. Paste and turn over the 1/2" flap on the left, rub down and dry under pressure. (A few minutes in the press will be enough to make the flap adhere perma-

TYPES OF CONSTRUCTIVE WORK

nently.) Then fold in pleats, paste flaps, and assemble as for Pleated Work Envelope (p. 114). The construction is shown in 8d, from which it will be seen that this pocket has a narrow pleat closing *outwards* on the long edge. This allows the pocket to open wider, and although it leaves a small opening at the corner, is the best construction possible at this stage. The making of square pleats to close *inwards* is difficult, and cannot be done neatly with thick paper on a small scale. Cloth is used for the purpose in the Senior Stages of the course.

- 4 Paste the back of the pocket, and mount as a lining in the centre of the case.

The Small Pocket:

- 5 Use the remaining piece of 80-lb. manilla, $10" \times 5\frac{1}{2}"$. Fold and cut as 8e. Assemble exactly as the large pocket, except that there is no pleat on the long edge.
- 6 When dry, paste the back of the small pocket, and mount on the top of the large pocket. The inside of the finished case is shown in 8f.

Decoration and lettering: This case lends itself to decoration by ruling as shown in the specimen in Plate XIa, in which small stick-printed embellishments are added at the corners of the ruling. No lettering is likely to be needed for this exercise.

- 9 LACED EXERCISE BOOK AND MANILLA TAGGED FILES. (Plate XIa, centre and right-hand top, shown closed; Plate XIb, left-hand bottom and right-hand top, shown open.)

This exercise produces very useful articles for school purposes in the upper forms of the Junior School. Each pupil can make one of the exercise books, in which he works day by day at various subjects on loose sheets of different rulings. As the sheets are used they are transferred to one of several manilla files, of which one is devoted to each subject. The exercise book can be replenished at will.

Exercise Book (to hold small exercise paper, F^ocap. 4to trimmed, $8\frac{1}{4}" \times 6\frac{1}{2}"$):

Boards: 2 pcs. 10-oz. strawboard, $8\frac{1}{2}" \times 6\frac{3}{4}"$.

Cover papers: 2 pcs. pastel, Cr. 4to, $10" \times 7\frac{1}{2}"$.

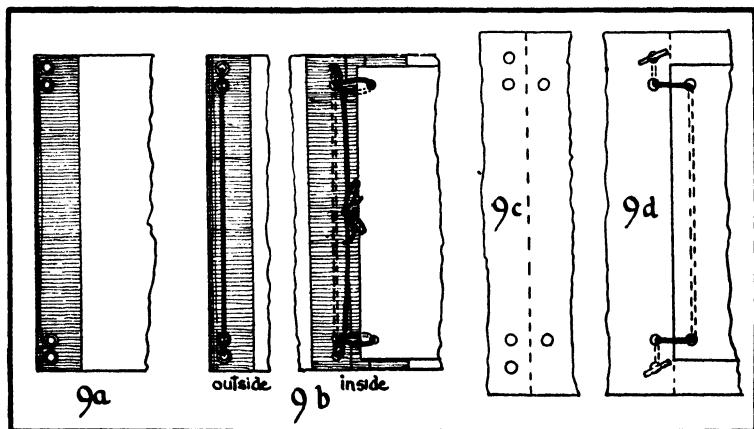
Linings: 2 pcs. pastel, Cr. 4to, $10" \times 7\frac{1}{2}"$.

Cloth: 1 pc. $17\frac{3}{4}" \times 2\frac{1}{2}"$ will make back and lining.

- 4 Eyelets, and about 22" of knitting cotton for lacing, will be needed.

Manilla Files:

- 1 pc. 100-lb. or 120-lb. manilla Cr. Folio, 15" × 10", for each file. Files for different subjects can be made of different colours.
- 1 11" or 12" cross tagged lace required for each file. A suitable lace can be improvised from a length of knitting cotton with a 1" length of match stick or wire tied to each end.

*Steps. The Exercise Book:*

- 1 Cut boards to $8\frac{1}{2}" \times 6\frac{3}{4}"$, cloth for back $2\frac{1}{2}" \times 9\frac{1}{2}"$, and narrow strip of manilla paper, $8\frac{1}{2}" \times \frac{1}{2}"$, to stiffen back.
- 2 Forward and complete the case exactly as the case for the Memorandum Pad, Exercise 7, p. 119, but mount plain linings on both boards in this exercise.
- 3 Punch for, and insert eyelets at head and tail of front board only, as 9a.
- 4 Prepare a punching gauge (see p. 60) and punch F'cap. 4to exercise sheets with holes $7\frac{1}{4}"$ apart centre to centre, and $\frac{3}{8}"$ in from edge, in quantities and ruling as required. Keep this punching gauge for punching more sheets later on.
- 5 Lace the book as shown in 9b. This method of lacing is adopted because (a) it allows the sheets to open flat and to be turned over easily, and (b) because the sheets can lie flat for writing without having a lumpy lace beneath them.

The Manilla File:

- 1 Fold the Cr. Folio sheet in half.
- 2 While folded, punch the inner holes through *both* covers; then open out and punch the outer holes through the *front* cover only (9c).
- 3 Lace with cross tag as shown in 9d. By slipping each tag out through outer hole, and in again through inner hole, sheets can quickly be added or removed.

Decoration and lettering: The exercise book, as it is a permanent and substantial possession of the pupil, may well have a little stick-printed decoration upon it, together with a label with name and form. The manilla files will need only lettering with name, form and subject; this may be done on a label, as in Plate XIa, or direct on the manilla cover.

110 POCKET BOOK. (Plate XIa, centre, bottom, shows outside; Plate XIb, centre bottom, shows inside.)

This will be found a popular exercise, especially among boys. It is very economical of material, yet gives ample scope at this stage for careful workmanship of a varied character. The notebook itself is slipped into the cover, and may be renewed.

The Cover: Boards: 2 pcs. 10-oz. strawboard, $4\frac{1}{2}" \times 3\frac{1}{4}"$.

Cover paper: 2 pcs. single Duxeen, $5\frac{1}{2}" \times 3\frac{1}{4}"$.

Cloth: 1 pc. $9\frac{1}{2}" \times 2"$ will make back and lining.

Pockets: 1 pc. 80-lb. manilla, Cr. 4to, $10" \times 7\frac{1}{2}"$, will make both pockets.

6" of narrow "hat" elastic.

The Book: Leaves: 4 pcs. F'cap. 4to writing paper, folded 4to and trimmed after sewing to $4" \times 3\frac{1}{8}"$.

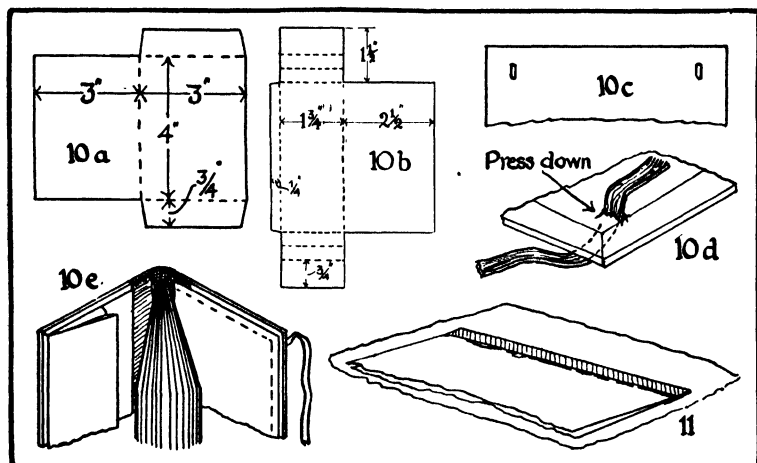
Cover: 1 pc. 80-lb. manilla, Cr. 8vo, cut $6\frac{1}{2}" \times 4"$.

Steps. The Cover:

- 1 Make and assemble cover, without linings, exactly as in Exercise 7, p. 119, using Duxeen for covering the boards.
- 2 Cut the Cr. 4to manilla into two pieces, one $6" \times 5\frac{1}{2}"$, and the other $7" \times 4\frac{1}{2}"$. Mark, fold and cut these as 10a and b.
- 3 Assemble pockets as 10c. The pleated pocket is similar to the small pocket in Exercise 8, except that the flaps are taken under the bottom, and not over the top, of the pocket.

BOOK CRAFTS FOR SCHOOLS

- 4 With a bradawl or narrow chisel, make two slots in the back cover, through the Duxeen and the board. Work from the outside (10c). Pass the ends of the elastic and draw in till length is suitable, and press down with folder the strawboard which has been forced in round the slots (10d). This will grip the elastic. Paste the free ends of the elastic and rub well down on to the inside of the board.



- 5 Paste the back of each pocket, and set in place as linings on the boards. Dry under pressure, using a thick pad of soft paper over the inequalities of the pockets, and the elastic.

Steps. The Book:

- 1 Fold the F'cap. 4to sheets into 4 (*i.e.* 4to), place inside one another to form a single section. Fold the manilla cover, place over the section, pierce and sew with 2 stitches, as Exercise 4, First Stage (p. 83).
- 2 Trim the book in the trimming press to $4" \times 3\frac{1}{8}"$. Slip one cover of the book into the thin pocket of the cover. The inside of the finished pocket-book is shown in 10e.

11 REBOUND SINGLE-SECTION BOOK: PAPER COVER, TRIMMED EDGES. (Plate XIa, left-hand top).

This book is bound exactly as Exercise 4, First Stage (p. 83), except that three-stitch sewing is used, and that the

edges are trimmed. In this exercise the process of repairing the backs of torn sections is included, as this method of binding is very useful for the binding of small readers, text-books, etc., such as are common in the Junior School. When re-sewn such books invariably need edge trimming.

Cover: the size depends on the book to be covered; for a Cr. 8vo. book a Cr. 4to sheet will generally do since the edges are to be trimmed. For a strong cover use 120-lb. manilla paper, or thick cover paper.

About 15" of thread will be needed for a book of this size, also a sheet of thin strong typing paper, large enough to provide narrow strips the length of the book, for repairs.

Steps. Taking to pieces and repairing.

- 1 Open the book out flat, and if sewn, cut the stitches and pull out the threads. If stapled, lift the ends of the staples with point of scissors or awl, then carefully lever out the staples from the back.
- 2 If any of the leaves are worn or torn at the fold, cut strips of thin typing paper about $\frac{5}{8}$ " wide and as long as the book. Fold each of these down the middle to mark the centre. Paste a strip, transfer it to a clean waste paper, and lay the folded leaf with its back in line with the middle of the strip (11). Press the back of the leaf down, bring the other half of the strip over by means of the waste paper, and rub down. Repeat with each leaf needing repair, and set the leaves aside to dry. Tears in other parts of the leaf may be simply but adequately repaired with the transparent paper tape sold for repairing torn music.
- 3 When they are thoroughly dry, place the pages together *in the correct order* as a single section, fold the cover sheet and place round outside the section. It will not matter if the cover at this stage is slightly larger or very slightly smaller than the book, as it is to be trimmed.

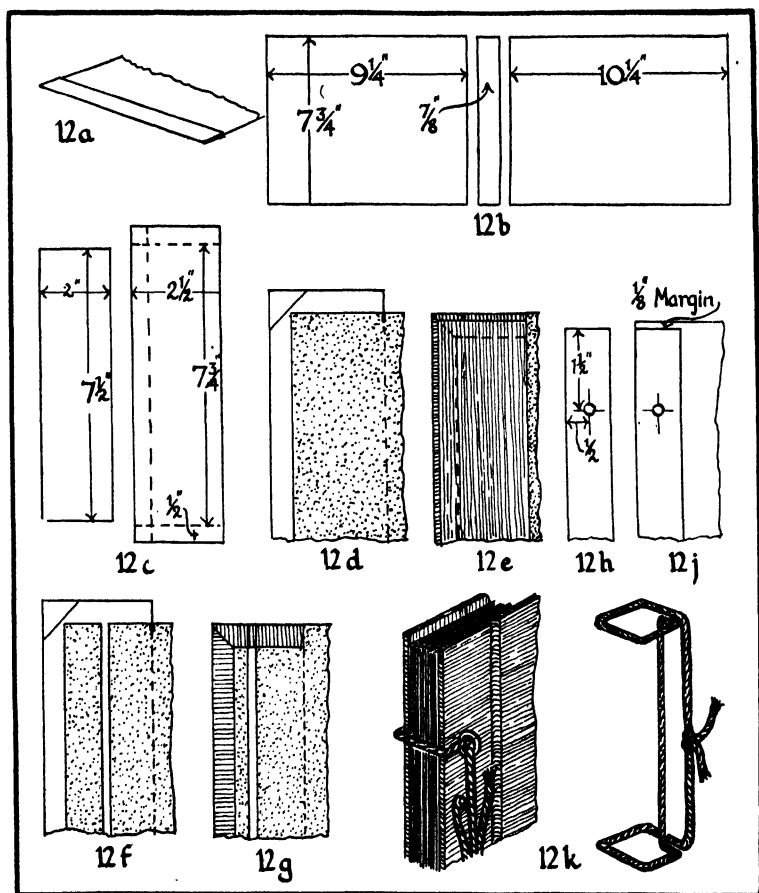
Open flat, mark and pierce for three-stitch sewing, and sew through pages and cover, as Exercise 12, First Stage.

- 4 Trim edges in the trimming press, cutting fore-edge first, exactly parallel to back, and then setting out and trimming head and tail exactly at right angles to fore-edge.

Decoration and lettering: Such a rebound book will not generally need decoration. For the title, if that on the original

BOOK CRAFTS FOR SCHOOLS

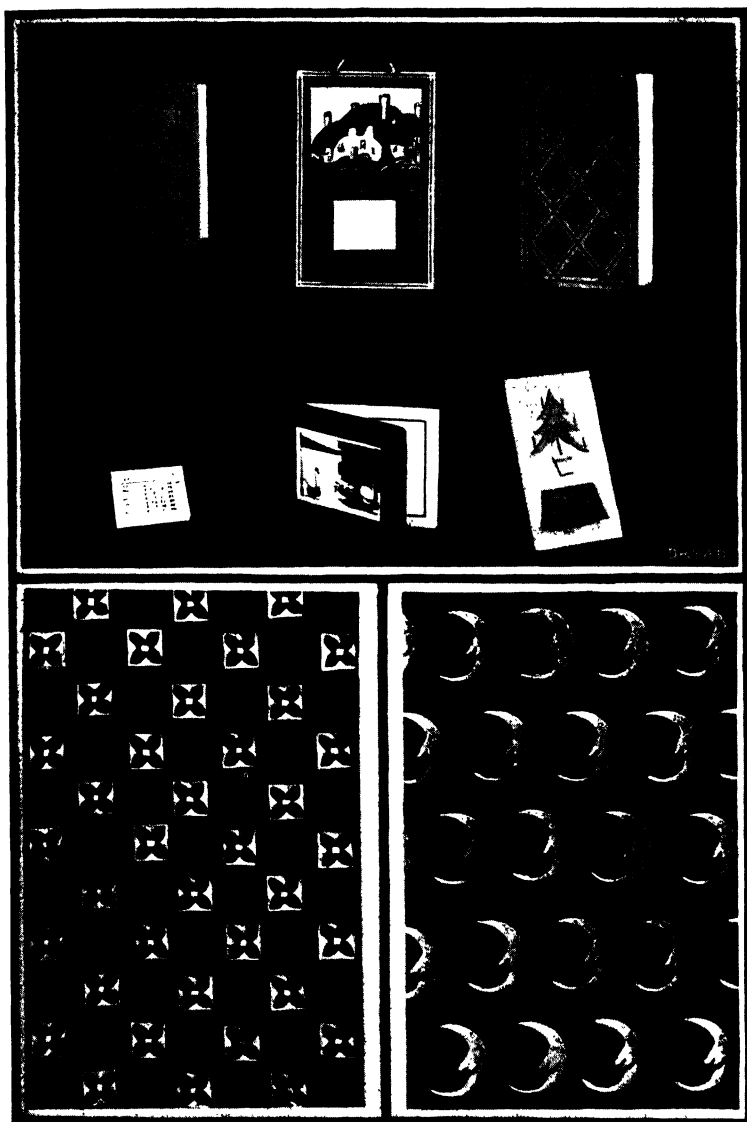
cover is suitable and clean, cut it out and paste on to form a label, as in Plate XIa. If not, letter a suitable label with the title and author of the book, and mount on the cover.



12 LACED ALBUM WITH OPEN BACK. (Plate XIb, right-hand bottom.)

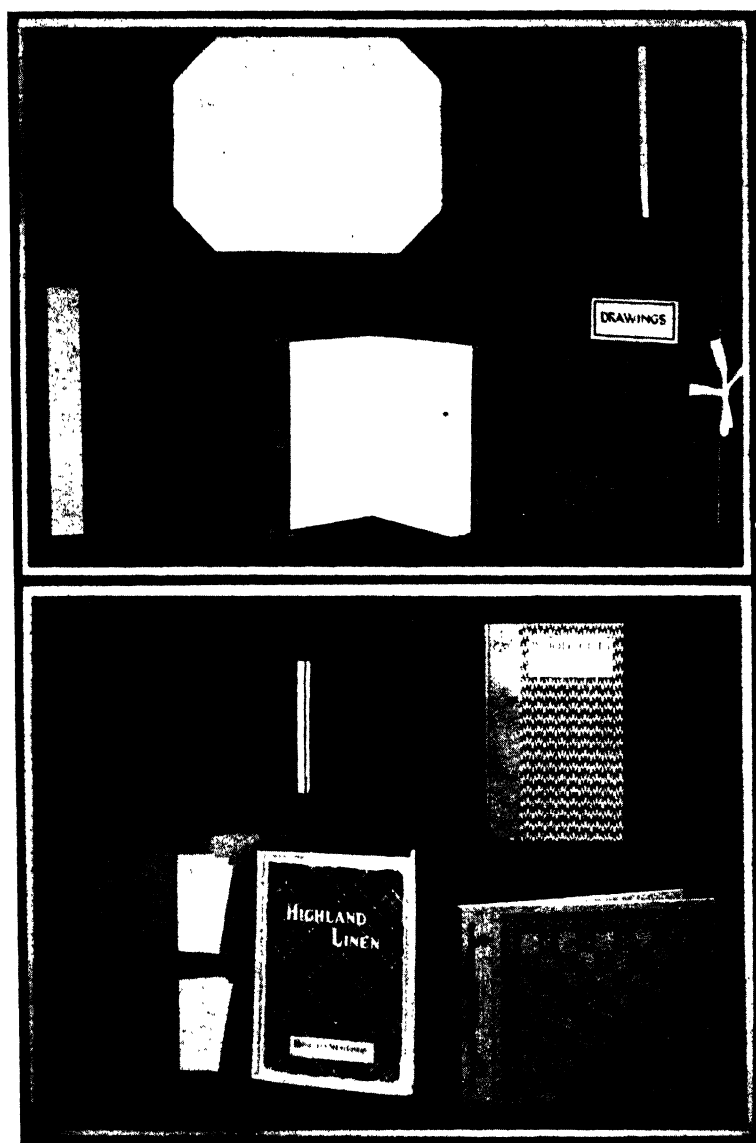
This is one of the simplest forms of single-sheet laced binding in board covers, and forms a suitable climax to the Junior Course. Appropriately decorated and made with pastel paper leaves, it forms an attractive album for photographs, pictures or cigarette cards.

Constructive Work: Third stage



Paste-colour Patterns: Dry-stamped with lino-stamps

PLATE XIV



Constructive Work: Third stage

PLATE XV

TYPES OF CONSTRUCTIVE WORK

Alternatively, white or tinted leaves may be used if it is needed as a drawing book or autograph album. Only the front cover is hinged.

Boards: 2 pcs. 16-oz. strawboard, $10\frac{1}{4}" \times 7\frac{3}{4}"$.

Cloth 2 pcs. $8\frac{3}{4}" \times 2\frac{1}{2}"$ and 2 pcs. $7\frac{1}{2}" \times 2"$.

Cover paper: 2 pcs. are required each $9\frac{1}{4}" \times 8\frac{7}{8}"$; six of these can be cut with little waste from a Double

Crown sheet of pastel paper, $30" \times 20"$.

Linings: 2 pcs. are required $8\frac{1}{4}" \times 7\frac{1}{2}"$; these can be cut without much waste from 2 Cr. 4to sheets, $10" \times 7\frac{1}{2}"$.

Four eyelets are needed, and about 18" double twist cotton cord.

Leaves: 16 Cr. 4to sheets pastel paper ($10" \times 7\frac{1}{2}"$) plus 3 extra sheets from which to cut the stubs.

Steps. The Leaves:

- 1 Cut as many strips of pastel paper $7\frac{1}{2}" \times 1\frac{1}{2}"$ as there are to be leaves, and fold each strip down the middle.
- 2 Paste a strip, lay on clean waste paper, place the edge of one leaf up to the fold, bring the stub over with the waste paper and rub down (12a). Repeat with each leaf, and dry the leaves under pressure in a pile, placing pages with the stubs at alternate ends, with waste paper between, to make a level pile.

The Covers:

- 3 Cut the boards and hinge strip of strawboard to sizes shown in 12b; then cut cloth strips to size and mark them as in 12c. Two pieces of each shape are required.
- 4 Mark top and bottom of back board 2" from end, lay on cloth strip, draw round and mark for mitres (12d). Cut mitres, paste cloth and bind end of board, adding cloth lining as 12e.
- 5 Mark top and bottom of front board 1" from end, and lay it and the hinge strip on cloth as 12f. Mark round, cut mitres, paste cloth and bind board and hinge strip together with the cloth (12g). In doing this, turn in head and tail overlaps first, rubbing them well into the hinge joint. When bringing over the long flap, take care not to drag the narrow board strip so as to close up the hinge space, which must be fully $\frac{1}{8}"$.

Line the hinged joint, using the method described on p. 70.

- 6 Cover and line front and back boards, using the same method as for Exercise 7, p. 119. Dry boards under pressure.

Punching and assembling:

- 7 Make a punching gauge as 12h, and use it to punch the leaves three or four at a time, punching through the stubs.
- 8 Place punching gauge on back board with equal margin at each end (12j) and punch through board. Repeat with front board, punching through narrow hinge strip. Fix eyelets in all four holes.
- 9 Lace boards and leaves as shown in 12k. For a book with open back it is desirable that the laces should pass round the back as shown.

Decoration and lettering: An all-over pattern may be printed on the cover papers before fixing them: but they should be waterproofed before pasting. If a panel, border or centre-piece pattern is to be applied it should be printed after the papers are fixed.

If a title is desired for the book, one should be neatly lettered on a label chosen to tone with the ground-colour of the book covers. The lettering should be done in a colour to match or tone with the printed pattern.

CHAPTER 10

Second Stage—Decoration and Lettering

DECORATIVE PROCESSES—Double printing—The first steps in control of unit design—Filing the printing stick—Fretwork files—Flat files—Profile filing—Line filing—Unit designs made possible by filing—Printing with filed sticks—Combed paste-coloured papers—Papers for paste-colour work—Brushes—Devices for making the patterns: combs—Colours: water-colours—Powder colours—Method of working: laying the colour—Making the pattern—Permanence of patterns: waterproofing—Avoidance of large patterns—LETTERING.

DECORATIVE PROCESSES

The practice already given to pattern printing with ready-made sticks can be put to good use in the production of more difficult patterns with similar equipment. As the pupil gains facility and speed in printing, so can his patterns contain closer printed and more numerous units, and involve more complicated arrangements.

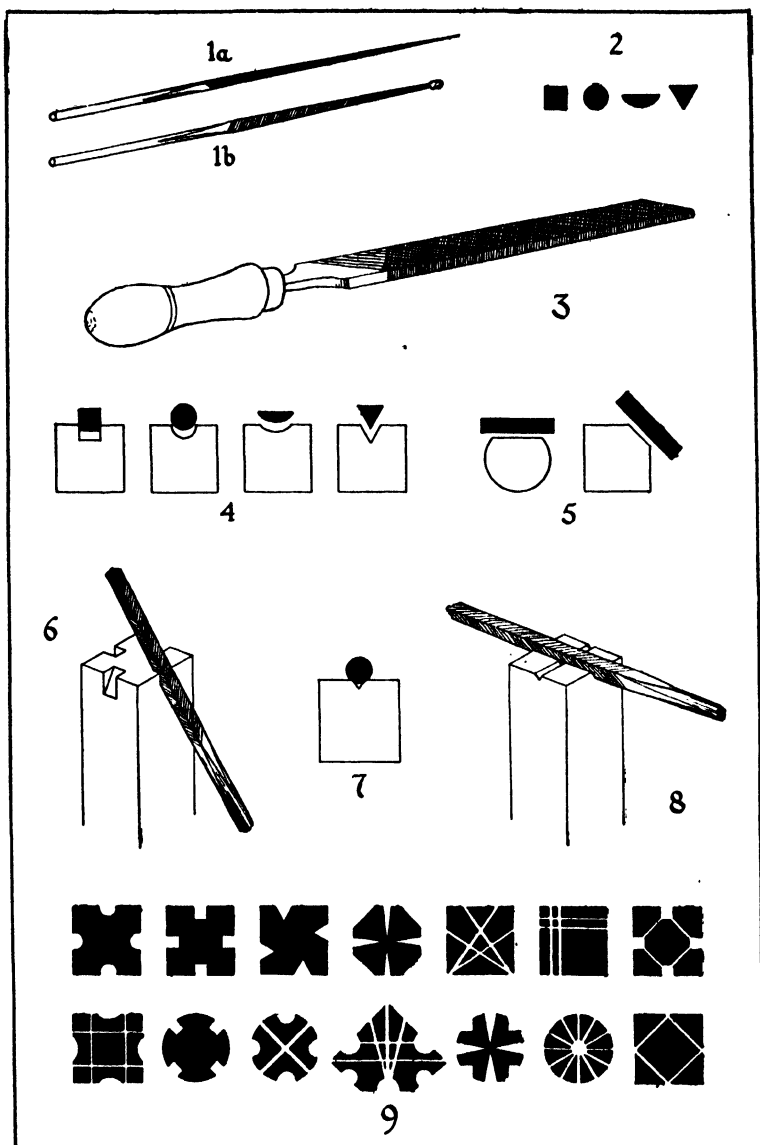
Double printing. A refinement of this work which may occasionally be effective is the device of double printing, *i.e.* the printing of one unit over the top of another unit of a different colour. The second printing cannot be done until the first has been allowed to dry, preferably for some hours, and even then there is a risk that the colour of the first unit may “pick up” on to the stick during the second printing, so that the last state of the pattern is worse than the first. However, with preliminary experiment and great care in printing, this difficulty can be overcome and a new range of pattern effects obtained.

It is easiest to print a dark unit over a lighter one; to print a light unit upon a dark one should not at this stage be attempted. The first pattern in Plate XII is an example of this type of printing.

First steps in control of unit design. The main advance in decorative technique at this stage lies in the beginnings of control by the pupil over the actual design of the unit of pattern. Hitherto, using ready-made sticks, his problem has been solely that of selection and arrangement: now he takes the first step towards designing his own unit of pattern.

Filing the printing stick. This first step consists of filing the end of his printing stick so as to modify, and probably to complicate, its shape. Printing sticks can of course be shaped by a variety of other means, such as drills, knives, chisels and hot irons, but none of these is so practicable for general school use at this stage as the file, which is safe and simple to use.

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DECORATION AND LETTERING

The files used are those sold as fretwork files (1a), 5" or 6" long being a suitable size. They cost a few pence each without handles, which are not necessary. If the sharp pointed ends are considered dangerous for young pupils, the tips may easily be snapped off with pliers, and the broken ends protected with a small knob of sealing-wax (1b).

These files can be obtained in a variety of shapes, of which the sections shown in 2 are the only ones likely to be needed.

In addition to a few of these for pupils' use, one or two larger flat files will be useful for filing "flats" on circular sticks and for taking off the corners of squares to form octagons. The kind to get is an 8" second-cut flat file, which should have a handle (3). It can be obtained at any tool-shop for about 1s.

Given the usual square, oblong, circular or triangular printing stick, there are two things which can be done with these files to modify the shape of the unit it will print.

The first is to alter its profile. Four different kinds of indentations, corresponding to the shapes of the four fretwork files, can be made in the profile of any stick by filing the end of it (4). The large flat file may be used to file a "flat" on a stick as in 5.

The method of profile filing is to hold the stick firmly against the edge of the table in the left hand, and, using the file in the right hand, to cut a sloping groove in the edge of the stick (6). Filing should be done slowly and steadily. It is sometimes difficult to start the round files exactly in the position required: this difficulty can be overcome by first making a small V-shaped nick with the triangular file and following it up with the round file as shown in 7.

The second way of filing is to cut grooves across the end of the stick, leaving lines which will not pick up the colour when printing. This is done with the edge of the triangular file, as shown in 8.

Thus the worker can vary the shape of his unit by any one of these means, or by combinations of them. A few examples of the endless variety to be obtained even within the limits imposed by the process are shown in 9.

An additional range of effects can be produced if sticks are used which have a hole bored in the end; these can be readily obtained.

Printing with filed sticks. For printing with these filed sticks there is little to add to the instructions for printing with plain

sticks, which are given on pp. 101-3. The main difficulty which will be encountered is the tendency to fill up the lines and finer indentations of the stick with colour, and the use of filed sticks demands very careful application of the colour with the printing brush.

If the end of a stick fails to print well owing to its not being flat, it can be flattened by carefully rubbing it on a sheet of fine glasspaper laid flat on the table.

Plate XII shows three patterns made with filed sticks.

Combed paste-colour papers. Combed paste-colour work is a method of decorating cover and end-papers which quickly and easily produces effective, and sometimes startling results. Used with restraint it is a most useful process, but its very speed and ease may be drawbacks and lead to its application being overdone. Though the patterns produced may vary largely, they do not offer nearly the same scope for control and systematic development as printed patterns.

The method consists of covering the paper completely with a colour mixed with paste, and, before it is dry, of combing the surface so that the colour of the paper groundwork shows through the marks of the comb.

Papers for paste-colour work. Too thin a paper should be avoided, as it may soften under the paste, swell and buckle, and drag under the comb. For a white ground, which should be the basis of most early efforts, use drawing (cartridge) paper. Imperial Octavo ($11" \times 7\frac{1}{2}"$) is a convenient size to practise on. For a tinted ground use pastel paper.

It must be remembered that whereas pattern printing can, if desired, be done after the cover paper has been fixed in its final position, paste-colour work must be done *before* covering; *i.e.* on the loose sheet of paper. It is rarely possible to work a combed pattern less than $\frac{1}{4}"$ from the edge of the paper without blemish; there is thus always some waste in the process as the edges will have to be trimmed, and the paper to be decorated must in the first place be larger than ultimately needed.

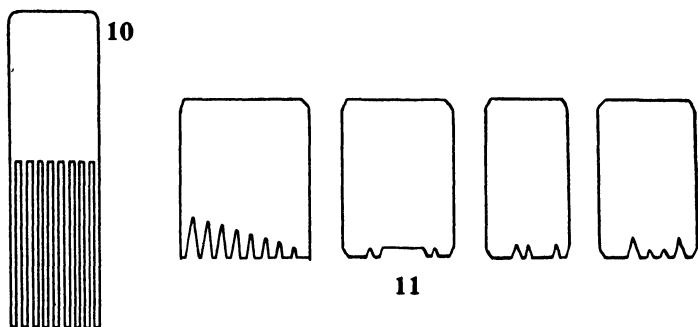
Brushes. The best type of brush is the flat varnish brush used for pasting (1, p.66)—the 1" size for small sheets, the $1\frac{1}{2}"$ size for larger ones.

Devices for making the patterns: combs. Grainer's combs (10) are most useful for the purpose. They are made of thin sheet steel, and can be bought with fine, medium or coarse teeth in 1", 2"

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and 3" widths, from dealers in house decorator's tools. They cost about 3d. for each inch of width, last indefinitely, and make fine, regular, clean-cut patterns.

Combs may be cut from cardboard or sheet tin. The former are likely to soften and bend in use, but can easily be replaced, and may be made in a variety of shapes (11).



A single piece of cane or wood cut to a chisel point, a stump of rolled paper or a narrow brush may be also used for making single lines, flourishes, etc., in patterns.

Colour. The colour will need to be mixed in something larger than the 3" palette used for printing; preferably a deep saucer or small bowl. Tube water colour is mixed with about twice its bulk of "Gloy" and a *little* water until when mixed it forms a thin cream which will just run from the brush. Mixed too thick the colour will stand in ridges on the paper when combed; too thin it will run and blur the pattern. A few experiments will show the correct consistency. As a rough guide about 1" of paint squeezed from a large tube will cover three or four Imperial Octavo sheets when mixed.

Dry powder colours may be used instead of water-colour, but they require more experience in mixing to ensure uniformly successful results, and are apt to dry with coarse and gritty surfaces. Blues, browns, yellows, dark red and black can be obtained very cheaply at any oil and colour merchants; some other colours such as vermillion cost more, and a good non-poisonous green is hard to get.

The powder is mixed with a little water, then "Gloy" is mixed with it until the consistency is thin and creamy.

Method of working. The paper to be decorated is laid on a sheet of newspaper and pinned down at the corners with drawing pins. Strawboard cutting boards (p. 55) covered with newspaper make excellent boards on which to work. The colour is quickly brushed on until the surface is covered; then the brush, having first been wiped free of running colour on the side of the bowl, is drawn from top to bottom of the sheet in regular strokes, leaving a uniform layer of colour on which faint parallel brush-marks are just discernible.

Unless very large sheets of paper are being coloured there is no need to damp the paper first—an Imperial Quarto sheet can be worked easily without damping.

While the colour is still wet the pattern is made, using the comb or other instrument with quick confident strokes. Whatever decoration is worked on the paper must be done *quickly*, and the patterns produced will therefore be bold and somewhat crude, as there is no time for exact measurement, spacing or “frameworks”.

The sheet is then left to dry. It may be unpinned and laid flat or hung up; it will not curl much. It should be remembered that the colours when dry will be less vivid than when wet.

These paste-coloured papers, if made with “Gloy”, will stand rubbing but are susceptible to damp. As they will generally need to be pasted during subsequent covering operations, it is essential to waterproof them before pasting, otherwise the paste will almost certainly soak through and soften the colour on the front so that it will be marred by handling and rubbing down. *It is very difficult for young pupils to paste and cover with these papers successfully unless they are waterproofed.*

Waterproofing is done with wax polish exactly as described for stick-printed patterns on p. 103. The surface may be given a dull polish, which improves its appearance as well as its wearing qualities.

A common error in this work is to make the patterns too bold and large to be suitable for the smaller articles of the book crafts course; patterns made with the fingers or with large strips of card frequently suffer from this defect. Narrow-toothed combs and small “texture” effects will be found the best if the paper is to be used in comparatively small pieces.

Plate XIII shows four of the many varieties of patterns possible with this process.

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LETTERING

The work of this stage in lettering involves no new principle beyond those already used in Stage I, broad pen writing being deferred to Stage III. The pupils should, however, be trained to be certain and skilful in their use of the narrow pen, and to produce finer letter forms and arrangements than were possible in Stage I. They should also make more use of ruling and very simple pen-drawn ornaments in their titling and labelling.

Part Three

The senior stages: constructive and decorative work

CHAPTER 11

Third Stage—Types of Constructive Work

CHRISTMAS CARDS—CALENDARS—OPEN BLOTTING PAD—PORTFOLIO WITH CLOTH BACK AND MANILLA LININGS—SINGLE-SECTION BINDING, LIMP FULL CLOTH, TRIMMED—LACED ALBUM WITH CLOSED BACK—CLOTH SLIP-ON READING COVER—SINGLE SECTION BINDING, QUARTER-BOUND IN BOARDS—LOOSE-LEAF POCKET NOTEBOOK—CORRESPONDENCE CASE

1 CHRISTMAS CARDS. (Plate XIVa.)

The card at the left-hand top of the Plate is of Type A (p. 79) but has simple broad-pen lettering and a pattern printed with filed sticks. That at the right-hand top of the Plate is of Type C (p. 81) printed with a simple lino-stamp pattern enriched with coloured ruled lines.

The card at the centre bottom of the Plate is of Type B (p. 79), except that it has a "double mounting" effect in its construction. Two folded leaves are used, the first being cut with a "window" to display a picture mounted on the second. A rather larger "window" is cut in the cover, giving the effect shown in the specimen. The construction is shown in 1.

Envelopes for these cards are as for Types A, B and C.

2 CALENDARS. (Plate XIVa.)

The calendar at the right-hand bottom of the Plate is of Type C (p. 82), but the decoration in this specimen is a fairly difficult example of cut-paper work. The photograph does not satisfactorily represent the effect of the colours. A green tree in a red-banded orange pot is mounted on a dark-blue ground. On the tree are red candles with orange flames. The small calendar cover is red and green.

Type G. (Centre top of Plate XIVa.)

This is a covered board similar to the Composition Card, Type F (p. 113), but is smaller.

Board: 1 pc. 10-oz. strawboard, $7\frac{3}{4}" \times 5\frac{1}{4}"$.

Cover: 1 pc. pastel paper, Cr. 4to, cut to $9\frac{1}{4}" \times 6\frac{3}{4}"$.

Lining: 1 pc. pastel paper, Cr. 8vo.

About $\frac{1}{4}"$ of cotton, silk or ribbon tie.

A small calendar.

Construct exactly as for Type F. The specimen shown has a coloured picture mounted at the top; below it a calendar with stick-printed cover, and the whole is surrounded by a border of lines ruled in Chinese white.

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Type H. (Left-hand bottom of Plate XIVa.)

This is somewhat similar to Type C (p. 82), except that a covered board is used for the front of the stand.

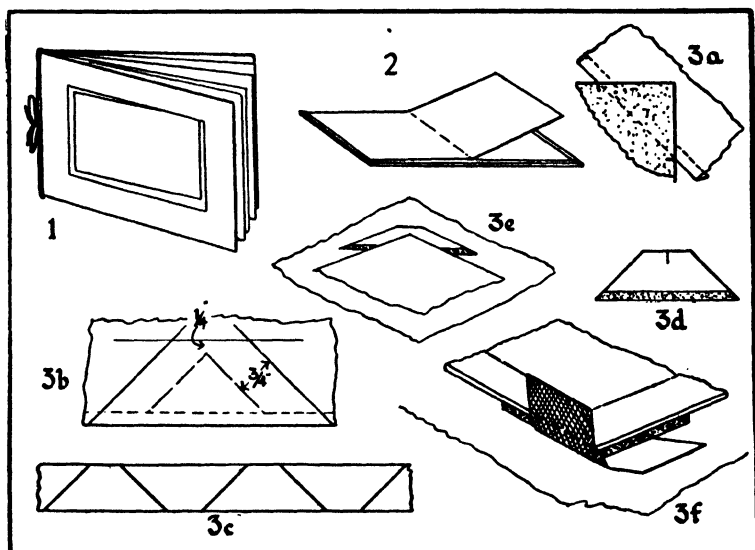
Board: 1 pc. 10-oz. strawboard, $6" \times 3\frac{1}{2}"$.

Cover: 1 pc. pastel paper, Cr. 8vo, also a piece about $3\frac{1}{4}" \times 2\frac{1}{2}"$ for lining lower part of the back.

Prop: 1 pc. tinted board or stiff cover paper, $6" \times 3\frac{1}{4}"$.

Three of these can be cut from a Roy. 8vo sheet.

Small calendar.



Cover the board as for Type F (p. 113). Instead of a lining at the back, fix the prop as 2, and line the part below the loose end of the prop. Dry under pressure. When dry complete decoration and mount calendar. The specimen shown is lettered with a broad pen and is decorated with a pen-drawn border.

3 OPEN BLOTTER PAD. (Left-hand top of Plate XVa.)

The suitability of this as an exercise for schools is apt to be over-rated. Made large enough to be of much use it consumes more blotting paper than can usually be supplied to each pupil in a large group; moreover both for school-work and home-work children generally prefer to use a loose sheet of blotting paper, which can be placed under the hand

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when writing and can be rubbed down on the work to be blotted. However, it is an article which may be of use in school and which forms an attractive present for an adult at home, and if desired it may appropriately be worked at this stage.

Blotting paper is usually sold in Demy size, $22\frac{1}{2}" \times 17\frac{1}{2}"$. A convenient size for the pad is therefore Demy 4to.

Board: 1 pc. 16-oz. strawboard $11\frac{1}{2}" \times 9"$.

Corners: 1 pc. cloth about $12\frac{1}{2}" \times 2"$.

Linings: will cut from 2 pcs. pastel paper, Cr. Folio, without much waste.

During construction 4 pcs. 32-oz. strawboard about 2" square will be needed but are not included in the finished article.

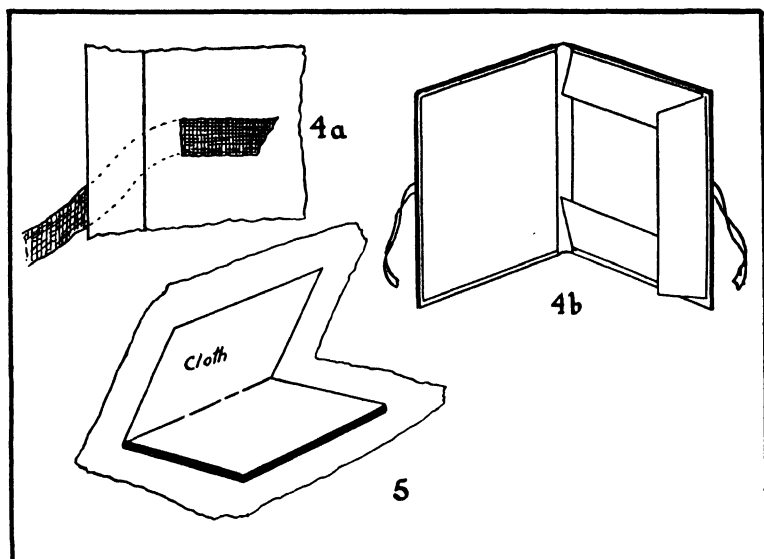
Steps:

- 1 Cut board to size, $11\frac{1}{2}" \times 9"$, and make a pencil mark $1\frac{1}{2}"$ in from each corner as 3a.
- 2 Make a pattern for the cloth corner as follows:
Lay one corner of the board in position on a piece of stiff paper as 3a, and pencil round it on the paper. Remove board, and set out pattern as 3b. Cut to shape. Note that the edge of the paper is doubled over.
- 3 Cut the strip of cloth to same width as pattern, then set out four corner pieces, using pattern as template (3c). Cut out the four pieces of cloth, and mark centre of each with pencil. Then paste and turn in the $\frac{1}{4}"$ edges of each piece. This turning in strengthens the exposed edges of the pockets. Trim off the projecting ends of the turn-overs; then each corner piece should appear as 3d.
- 4 Cover the *top* or front of the board with pastel paper, turning it over at least $\frac{1}{2}"$ all round and mitreing the corners at the back, as in Exercise 2, Second Stage, Type F (p. 113).
- 5 Paste the flaps of one piece of cloth, using a folded waste-paper as pasting guard (3e). Transfer the cloth to double clean waste paper. Place one of the small pieces of thick strawboard in position on the cloth, and on top of this one corner of the blotter back, face downward. Bring over one flap of cloth to the back and rub down; tuck in mitre, then bring over the other flap (3f). Repeat this at the other three corners.

BOOK CRAFTS FOR SCHOOLS

- 6 Turn the blotter over, carefully remove the four pieces of waste card (in case any paste may have adhered to them), cover each with waste paper and replace in the cloth corners. Dry the whole under pressure. (If the cardboards are not covered in this way they may be found to have stuck in after drying.)
- 7 When dry, line the back of the board with paper, leaving $\frac{1}{8}$ " margin all round.
- 8 Trim a pad of Demy 4to blotting paper and insert under the corners.

Decoration and lettering: If desired a very simple stick-printed decoration can be added to each corner of the pad; or one corner can be lettered with initials or a monogram with broad pen.



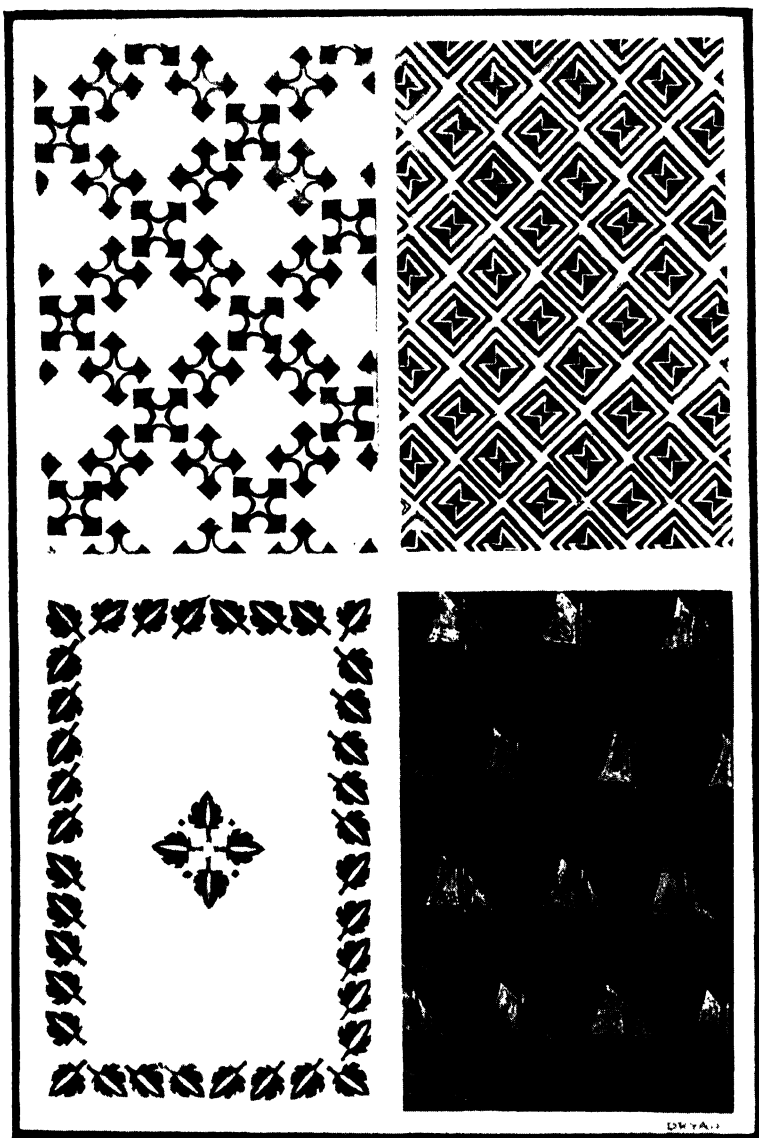
- 4 PORTFOLIO WITH CLOTH BACK AND MANILLA LININGS. (Bottom right-hand of Plate XVa.)

This will hold Imp. 8vo, Cr. 4to, or L. Post 4to sheets, *i.e.* the common school sizes of white drawing, pastel drawing and large exercise paper.

Boards: 2 pcs. 16-oz. strawboard $11\frac{1}{2}" \times 8"$.

Cloth: 1 pc. $12\frac{1}{2}" \times 4"$ and 1 pc. $11\frac{1}{4}" \times 4"$.

Covers: 2 pcs. cut from 2 sheets pastel paper, Cr. Folio.



Patterns printed with simple Lino-stamps: d is printed on a paste-colour combed ground

PLATE XVI

TYPES OF CONSTRUCTIVE WORK

Linings: both will cut from 1 sheet 80-lb. manilla, Crown size.

About 16" of tape for ties.

Steps:

- 1 Make the case exactly as the Memorandum Pad, Exercise 7, Second Stage (p. 119), but without linings.
- 2 Cut slits, insert tapes and paste down as 4a.
- 3 Line left-hand board with plain manilla lining, and right-hand board with lining folded as 4b.

Decoration and lettering: An all-over pattern printed with sticks or lino-stamps may be used, in which case it should be completed and the sheets waterproofed before fixing to the boards. If a border pattern is preferred, print after fixing, taking care that the pattern clears or allows for the tapes. A suitable title can be lettered on label with broad pen.

5 SINGLE-SECTION BINDING, LIMP FULL CLOTH, TRIMMED. (Right-hand top of Plate XVa.)

This is similar to the rebound book of Exercise 11, Second Stage (p. 126), but is stronger. The book is first sewn with a thin manilla cover, which is mulled, sewing being through the mull. It is then covered outside with cloth, and the whole trimmed. It is a very strong and simple binding suitable for rebound readers, hymn-books, etc., of the single-section type.

The size of the materials required depends upon the book to be bound; for a Cr. 8vo book (a common size) a Cr. 4to sheet of 80-lb. manilla, a strip of mull $7" \times 1\frac{1}{2}"$, a piece of cloth $10" \times 7\frac{1}{2}"$, and about 15" thread, will be required.

Steps:

- 1 Repair leaves if necessary, and sew book with paper cover which has been mulled, sewing through the mull. Except for the mull, the process is exactly as Steps 1 to 3 of Exercise 11, Second Stage (p. 127).
- 2 Paste the cloth, lay on double clean waste paper, and lay the book, closed, upon it so that the back of book comes to the centre of the cloth. Pull the cloth tightly round the book with the waste sheet (5). Dry under pressure.
- 3 When dry, trim edges as Step 4, Exercise 11, Second Stage (p. 127), cutting through cloth and all.

Decoration and lettering: If a printed decoration is required on the cover it must be worked in printer's ink, unless matt surface cloth is used, and only a very small unit should be chosen, to avoid covering the cloth too much with ink.

The title may be cut from the original cover if suitable, and applied as a label, or a label may be written with a broad pen, choosing suitable colours for writing and label.

6 LACED ALBUM WITH CLOSED BACK. (Plate XVb, right-hand bottom.)

This album has both covers hinged, for ease of opening. The closed back gives a better finish than the open back of an earlier Exercise in the Second Stage (p. 128). It is laced with loose stubs formed of a continuous strip of paper folded between the pages.

Boards: 2 pcs. 16-oz. strawboard $10\frac{1}{4}" \times 7\frac{3}{4}"$.

Cloth: 1 pc. $8\frac{1}{2}" \times 3\frac{1}{4}"$ and 1 pc. $7\frac{1}{2}" \times 3\frac{3}{8}"$.

Covers: 2 pcs. pastel paper $9\frac{3}{4}" \times 9"$ are required; six of these can be cut economically from a Double Crown sheet.

Linings: 2 pcs. pastel paper Cr. 4to.

Leaves: 24 pcs. pastel paper Cr. 4to.

Stubs: a strip $19\frac{1}{2}" \times 7\frac{1}{2}"$ is required: four can be cut without waste from a Double Crown sheet of pastel paper similar to that used for the leaves.

Four eyelets and about 24" of double twist cotton cord are needed.

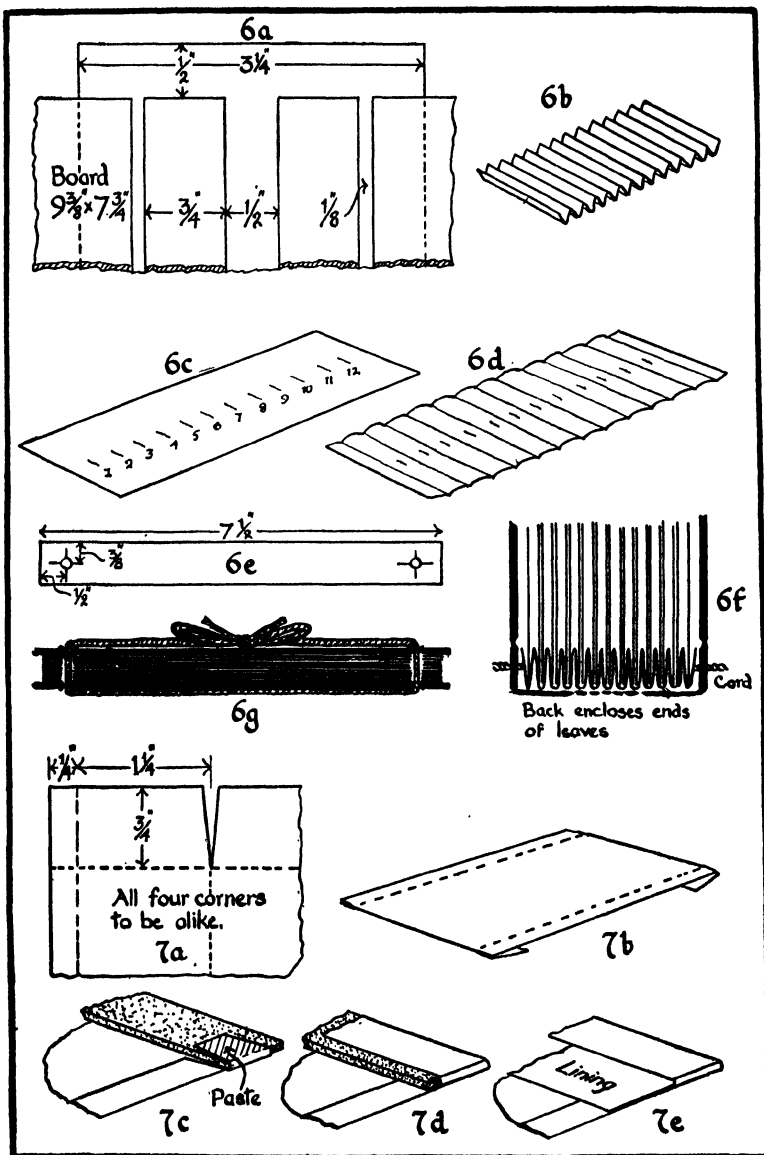
Steps. The Cover:

- 1 Cut boards, hinge strips, and cloth back to sizes shown in 6a. Stiffen the back with a strip of paper placed inside the cloth after pasting.
- 2 Paste the cloth and mount the boards, rubbing the turnovers at head and tail well into the hinges.
- 3 Line the back with cloth (see p. 70).
- 4 Cover the sides, allowing $\frac{3}{4}"$ turnovers for the cover paper. Line the sides. Lay cover open flat and dry under pressure.

The Leaves and Stubs:

- 5 Cut the strip for the stubs $19\frac{1}{2}" \times 7\frac{1}{2}"$, and fold to the form shown in 6b, working as follows: Along the centre of one side of the strip make pencil marks $1\frac{1}{4}"$ apart as 6c. Then

TYPES OF CONSTRUCTIVE WORK



fold the end successively to marks 1, 3, 5, 7, 9, etc., and repeat similarly from the other end. The strip is now creased as 6d. Turn it over, and by folding the end successively to the creases in a similar way the reverse creases can be made. It is a process much easier to understand by experiment than from a description.

- 6 Make a punching gauge as 6e, and with it punch the leaves. Squeeze up the folded strip together and punch it to fit the leaves. If the folds are too thick to punch all at once, take a few at a time.

Assembling:

- 7 Punch for and fix eyelets in the cover to match the holes in stubs and leaves.
- 8 Assemble cover, stubs and leaves as 6f, and lace. The method of lacing is shown in 6g.

Decoration and lettering: The cover may be printed with an all-over pattern with lino-stamps. No lettering will as a rule be needed.

7 CLOTH SLIP-ON READING COVER. (Plate XVa, centre bottom.)

Similar in construction to the manilla reading cover made in the First Stage, this is a much more durable article, and is more flexible in use.

The size will of course depend upon the book to be covered; the size given here will take a Cr. 8vo book about $\frac{3}{4}$ " thick, which is a common size for school textbooks and readers.

Cloth: 1 pc. $14" \times 9\frac{1}{4}"$.

Lining: 1 pc. 80-lb. manilla, $11" \times 7\frac{3}{4}"$. This can be cut from a Cr. Folio sheet, leaving strips which can be used for the pocket linings, without much waste.

2 strips 32-oz. strawboard, $7\frac{3}{4}" \times 1"$, are needed during construction but are afterwards discarded.

Steps:

- 1 Cut the cloth to $14" \times 9\frac{1}{4}"$, and mark and cut it as 7a. Paste and turn over the $\frac{1}{4}"$ strips at ends—this strengthens the edges of the pockets.
- 2 Turn back the ends of the cloth, and paste centre portion as 7b. Lay the manilla paper on this and turn overlaps at head and tail. Now open out one end flap, lay one of the strips of thick card on it, turn in the small flaps and paste

TYPES OF CONSTRUCTIVE WORK

them (7c), using a pasting guard (not shown in diagram) under the flap. Then bring the end flap, card and all, over into position as 7d, and press the pasted flaps well down. Leave the card in position and repeat at the other end.

- 3 Cut two pocket linings, $7\frac{1}{2}'' \times 2\frac{1}{4}''$, from manilla paper, and fix these as shown in 7e, working them well down inside the pockets with folder. Replace card packings, covering them with waste paper to avoid sticking, and dry the cover laid flat under pressure.

Decoration and lettering: As a rule this type of cover will not need decoration; if any pattern printing is desired it must be done in printer's ink. The cover may be lettered with the name of the owner or of the school library.

8 SINGLE-SECTION BINDING, QUARTER-BOUND IN BOARDS. (Plate XVb, right-hand top.)

This method is a decided advance on all binding hitherto attempted in the course, for it is the first to include a properly made cloth back and covered boards. It is useful for rebinding single-section books which it is desired to have in stiff covers; it may also be applied to the making of small albums, notebooks, etc. It is particularly applicable to the binding of thin music books or other single-section books for which limp covers are unsuitable.

The material required depends of course upon the size of the book to be covered; for a first exercise the teacher will be wise to choose a book not larger than Crown or Demy 8vo.

Boards: 2 pcs. 10-oz. strawboard (16-oz. for larger books).

Flyleaf and waste end-paper: 2 pcs. drawing or printing paper, twice the size of the book.

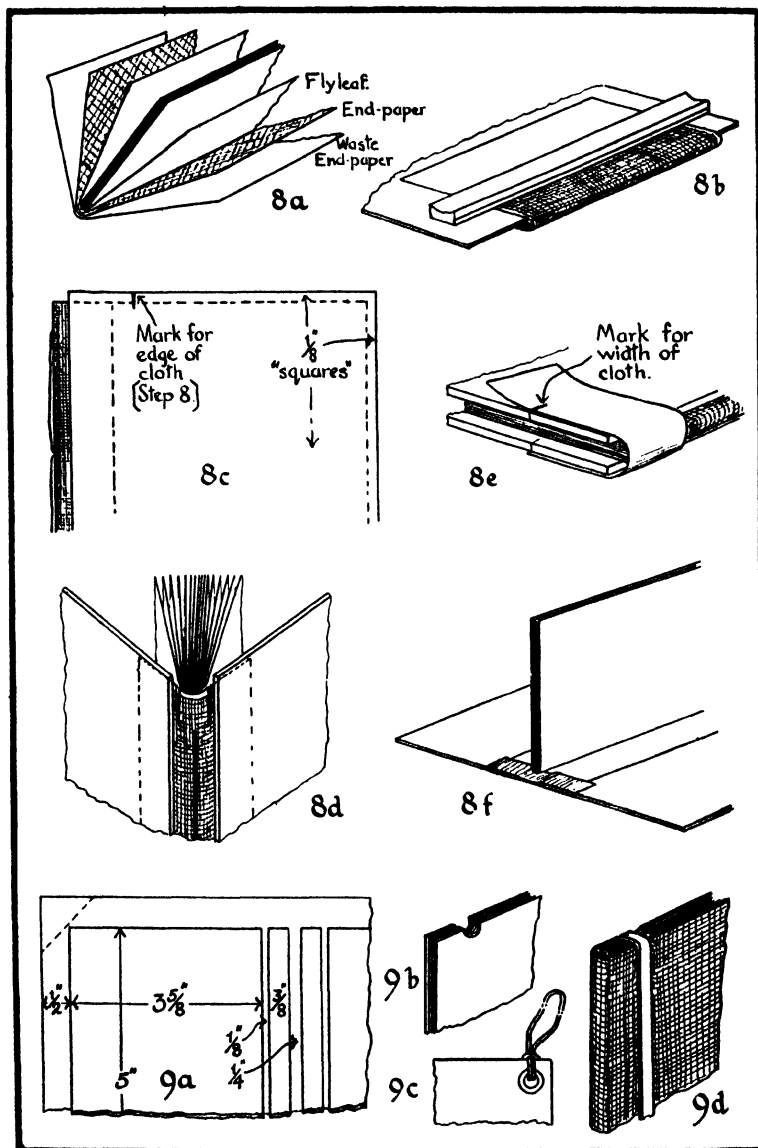
End-paper: 1 pc. pastel paper twice the size of the book, *i.e.* as long but twice as wide. This size will usually be suitable if the book is to be trimmed; if not, these papers must be large enough to come right up to the fore-edge of the book when they are folded round it.

Mull, thread, cloth for the back, and cover papers for the sides will also be required.

Steps:

- 1 Carefully remove all stitching or staples, and the remains of the previous cover, if any. Repair leaves if required.

BOOK CRAFTS FOR SCHOOLS



TYPES OF CONSTRUCTIVE WORK

- 2 Prepare, by folding, the white flyleaves, coloured end-papers and waste end-papers, and fit round the book as 8a, having first mulled the waste end-paper. Sew through the mull, using three- or four-stitch sewing according to the size of the book.
- 3 Trim the edges of the book in the trimming press.
- 4 Place a cutting board under the waste end-paper and cut it off close to the edge of the mull, as 8b. Repeat with other waste end-paper.
- 5 Cut two boards exactly rectangular, to measure as 8c, which allows $\frac{1}{8}$ " "square" or overhang at head, tail and fore-edge, and sets board $\frac{1}{8}$ " (or more for a thick book) back from the fold of the section.
- 6 Place waste paper under the mulled hinge, in similar position to the cutting board in 8b, paste the mull, and set one board in position. Repeat with the other board, taking care that the boards are exactly aligned with one another and with the book. Dry under pressure.
- 7 When dry, open the covers and with scissors cut through the mull and waste end-papers about $\frac{5}{8}$ " down from head and tail, as 8d. Do *not* cut through the coloured end-papers. (This cutting-down is not strictly necessary with a single-section book, but it is well to get the pupils into the habit of doing it for *all* covering, as it is essential when multi-section books are covered.)
- 8 Mark boards as shown in 8c, where the edge of the cloth back is to come. Remember that this will be $\frac{1}{8}$ " further from the back than the edge of the cloth will finally appear, as the cover papers will overlap it by this much.
- 9 Measure round the back of the book from one mark to the other as shown in 8e, pressing the book down on a flat surface and drawing a strip of paper tightly round the back of the book. Mark the paper with the width of the cloth required.
- 10 Set out and cut a strip of cloth exactly to this width and 1" longer than the back of the book, to allow for turning in $\frac{1}{8}$ " at head and tail.
- 11 Paste the cloth, lay on clean waste paper, and lay the book open in position on it. Raise the leaves of the book and turn in the cloth at head and tail, passing it through

BOOK CRAFTS FOR SCHOOLS

the cuts in the mull hinge (8f). Place waste paper inside boards, to prevent end-papers from sticking down, close book, work cloth well into hinge with folder, and dry under pressure.

- 12 When dry, cover the sides with paper exactly as in previous exercises.
- 13 Open the book and see that the coloured end-papers throw back on to the boards in the correct position, giving $\frac{1}{8}$ " margin all round. If necessary, trim the end-papers slightly to correct small errors.
- 14 Throw back one cover, paste the end-paper as described on p. 72, remove pasting guard and close cover. Open again and rub down end-paper in position. Repeat with other end of book.
- 15 Place pressing tins (if available, if not use double sheets of waste paper) inside the end-papers, close book, wrap with waste paper, and dry under pressure. The pressing tins should be covered with waxed or waste paper.

Decoration and lettering: If a plain pastel paper has been used, a pattern may be printed on it after covering; or an all-over pattern may be printed before covering, provided that the paper is water-proofed before pasting. Alternatively, the cover papers may be paste coloured and combed or dry stamped; these also must be water-proofed before pasting.

The title may be cut from the paper cover of the original book, or a title may be lettered on a suitably coloured label with broad pen.

9 LOOSE-LEAF POCKET NOTEBOOK. (Plate XVb, left-hand top.)

This is a useful and simple type of construction for small notebooks, and is very cheap to make. It should not be used if it is important that the book should open quite flat. The specimen shown is bound in full cloth: it could equally well be made with cloth back and paper-covered sides.

Boards and hinge strips: 2 pcs. 16-oz. strawboard $5" \times 4\frac{1}{8}"$.

Cloth: Back: 1 pc. $9\frac{1}{2}" \times 6"$.

Lining: 1 pc. $4\frac{3}{4}" \times 2\frac{1}{4}"$.

Leaves: L. Post 4to trimmed exercise paper ($10" \times 8"$) cut 4to, i.e. $5" \times 4"$. 24 leaves, i.e. 6 sheets, make a suitable thickness book.

TYPES OF CONSTRUCTIVE WORK

Board linings: cut from 1 pc. pastel paper Cr. 8vo.

A stout elastic band, a fine elastic band, and an eyelet are also required.

Steps:

- 1 Cut boards, hinge strips, and cloth back to sizes shown in 9a. Mark and cut mitred corners on cloth.
- 2 Paste cloth and cover the boards, turning over $\frac{1}{2}$ " all round, taking care to work the cloth well into the hinge joints.
- 3 Cut and fix the cloth hinge lining (see p. 70).
- 4 Line the boards with pastel paper.
- 5 Cut the leaves to $5" \times 4"$, put them together and snip a half-circle out of head and tail with the punch, as 9b. This allows the elastic band to grip them so that they will not drag out of the cover.
- 6 Fix an eyelet in the back cover and thread a thin elastic band into it as 9c. This band serves to keep the book closed or to hold the pages down in use.
- 7 Assemble the book, using a thick elastic band to grip the back as 9d.

Decoration and lettering: For pocket use, this book is best made in a dark cloth, without decoration or outside lettering.

10 **CORRESPONDENCE CASE.** (Plate XVa, left-hand bottom, shown closed; Plate XVb, left-hand bottom, shown open.)

This case forms an excellent exercise for the end of the first year's work in the Senior School. It is made to hold a writing pad of the kind now in common use (the one in the specimen was bought for 6d. at Woolworth's), together with envelopes. It is of substantial construction, is very cheap to make, and forms a most attractive present for the home.

Its construction introduces the use of square pleated pockets made in cloth. The sizes given are for a writing pad $9\frac{1}{2}" \times 6\frac{3}{4}"$, which is the usual size for these pads.

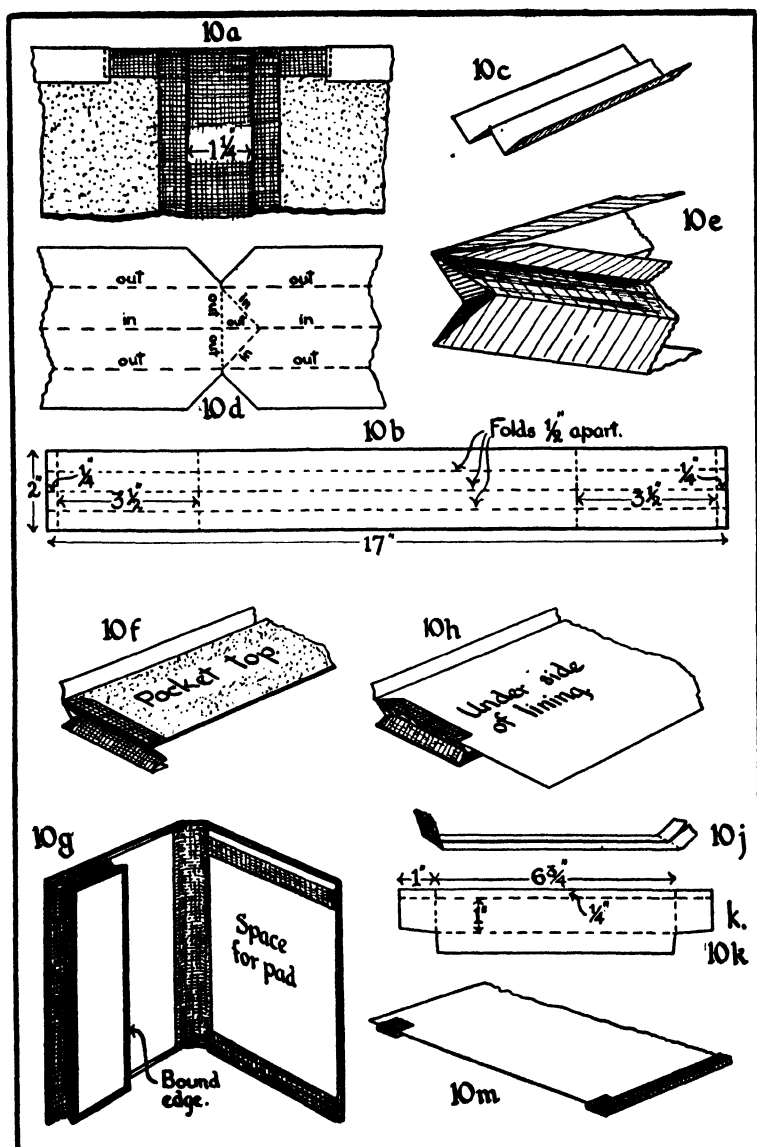
Boards: 2 pcs. 16-oz. strawboard $7" \times 9\frac{3}{4}"$, and 1 pc. $9\frac{1}{2}" \times 3\frac{1}{2}"$.

Cloth: Back: 1 pc. $10\frac{3}{4}" \times 4"$.

Lining: 1 pc. $9\frac{1}{2}" \times 2\frac{1}{4}"$.

Pocket: 1 pc. $17" \times 2"$, and 1 pc. $9\frac{1}{2}" \times 1"$.

Pad pocket: 1 pc. $8\frac{3}{4}" \times 1\frac{1}{4}"$, and 1 pc. $8\frac{3}{4}" \times 2"$.



TYPES OF CONSTRUCTIVE WORK

Cover: 2 pcs. pastel paper (or paste-coloured drawing paper) $11" \times 6\frac{1}{4}"$ (cut both from an Imp. 4to). If pastel paper is used, a Cr. Folio sheet will cut both covers and the top pocket lining.

Linings:

Pad: from 1 pc. Cr. 4to 120-lb. manilla paper.

Pocket: from 1 pc. Cr. 4to 120-lb. manilla paper.

As a stronger alternative, these linings may be made of 8-oz. strawboard, covered with pastel or patterned paper.

Pocket top: from the Cr. Folio sheet used for covers, or a separate piece $9\frac{1}{4}" \times 3\frac{1}{4}"$.

Steps. The Cover:

- 1 Complete the cover as a quarter-bound case, up to the stage of lining the back but not the boards (10a). The lining laps only $\frac{1}{2}"$ on to each board, and is thus narrower than the cloth back.

The Pocket:

- 2 Cut a board $9\frac{1}{2}" \times 3\frac{1}{2}"$, and a strip of cloth $17" \times 2"$. Mark the cloth as 10b.
- 3 Paste and turn in the ends of the cloth $\frac{1}{4}"$. Then crease the cloth with folder as 10c. Flatten out the strip and make transverse folds at the cross lines (10d). Cut the mitres.
- 4 Again flatten out, and at each cross line mark and crease folds as 10d. With a little manipulation the cloth can now be folded as 10e, the corner of a square pleat. This process may seem puzzling at first, but if preliminary experiments are made with a strip of stiff paper the method will soon become apparent.
- 5 Fold the pleat into its final form, and using the board as a pasting guard, paste the flaps, then turn them over on to the board and rub down (10f).
- 6 With a strip of cloth $9\frac{1}{2}" \times 1"$ mitred at each end bind the front edge of the pocket-top (10g). Line both sides of pocket-top.
- 7 Prepare the lining for the left-hand board, see that it fits the pocket, lay pocket face down, and using the lining as a pasting guard, paste the flaps and bring them over on to the lining (10h). Then paste lining, and fix the whole into position in the cover, as in 10g. See that the pocket is pressed well down into place.

The Pad Pocket:

- 8 Cut a strip of cloth $8\frac{3}{4}" \times 2"$, fold, then open, paste and refold to make a strip 1" wide of double thickness (10j).
- 9 Cut a piece of cloth $8\frac{3}{4}" \times 1\frac{3}{4}"$ to shape shown in 10k. Paste and turn over the $\frac{1}{4}"$ edge.
- 10 Prepare a lining for right-hand board, $6\frac{3}{4}"$ wide and of suitable length to give $\frac{1}{8}"$ margins at top and bottom.
- 11 The positions of the strap and bottom pocket are shown in 10g. They are fixed to the lining as 10m, using loose packing pieces of thin strawboard which, when removed, leave space for the pad back to slide in. The method is similar to that used for the cloth reading cover, Exercise 7, p.148. Then the lining is fixed into its place on the cover.

The stiff back of the pad is slid under the strap and into the lower pocket.

Decoration and lettering: The specimen in Plate XV is covered with a paste-coloured combed paper, waterproofed and polished. This is a very suitable method of decoration for this article, as an Imp. 4to piece of drawing paper, paste-coloured, will make both covers without waste. Alternatively a pattern-printed cover may be used. This exercise will not as a rule require lettering, unless with initials or a monogram, which should be done with a broad pen on a suitably coloured label.

Third Stage—Decoration and Lettering

DECORATION—Stages in the control of unit design—Lino-stamps—Linoleum—Corks—Preparing the stamps—Tools for lino-cutting—The cutting block—The holding board—Marking the design—Cutting—Need for the sloping cut—Importance of the V-groove—Curved cuts, etc.—Use of the gouge—Shaping the cork—Steps in cutting a unit—Printing with lino-stamps—Types of patterns—“Topical” patterns—Printing on cloth: the use of printer’s ink—Manipulation of printer’s ink—Paste-colour work: dry stamping—Edge stencilling—LETTERING—The place of lettering in book crafts—The broad pen—Sizes of nibs—Method of using the broad pen—The writing board—Alphabet for broad-pen writing—Practice strokes—Setting-out: writing fluids—Spacing of letters.

Stages in the control of unit design. Up to this stage the pupils’ control of the form of the unit used in pattern printing has been kept within fairly narrow limits; first by the use of ready-made sticks, and later by the restriction of the units to those which could be made by the file.

The next step widens these limits very considerably, for by the use of linoleum for the printing surface a far greater variety of form for the unit is made possible.

Lino-stamps. The linoleum faced printing units are spoken of as “lino-stamps”, and are used exactly as printing sticks. They should be distinguished from “lino-blocks”, which are used later in the course, for the latter are not stamped on to the paper, but are used face uppermost, the paper being rubbed or pressed on to them to make the imprint, much in the same way as type is used in a printing press.

The most convenient form of lino-stamp for school use is made from a bottle-cork with its larger end covered with linoleum. As will be seen, this kind of stamp can be conveniently and safely made in any size up to $1\frac{1}{2}$ " diameter without needing a vice in which to hold the cork while cutting the lino.

Linoleum. Any scraps of clean and preferably new linoleum can be used, providing they are of the kind known as “cork lino” or “inlaid lino”. The cheap kind of linoleum which has a pattern printed or painted on its surface is *not* suitable. Plain brown or green cork lino is best; other colours are sometimes gritty to cut, and the smaller inlaid patterns may come apart when cut into small pieces. Cuttings of new linoleum may sometimes be bought cheaply from house furnishers; even if half-a-yard is bought from the roll it is economical in use as every scrap down to $\frac{1}{4}$ " square can be utilised.

If old linoleum is used, every trace of dirt and polish must be removed from its surface, otherwise the colour will not hold to the stamp. This is best done by scrubbing the lino with a strong soap powder, such as Hudson's, and hot water.

Corks. Old bottle corks are quite satisfactory if they can be obtained in sufficient numbers, in good condition, and of suitable sizes. This may be difficult for a large class, and it is advisable to buy a quantity of new corks, varying in diameter from $\frac{1}{2}$ " to $1\frac{1}{2}$ " at the large end, from a druggist or a laboratory furnisher.

Preparing the stamps. The first step in preparing the stamp is to cut out (using shears or tinman's snips) a square of lino very slightly larger than the cork to be faced. The larger end of the cork is then covered thinly with glue, such as "Croid" or "Seccotine," pressed down upon the canvas back of the lino, and left for a day to set (1a).

When the glue is set the cork is held face downwards on a cutting board, and the projecting edges of the lino trimmed off with a table knife (1b). The appearance of the cork when ready for the unit to be cut is shown in 1c.

Tools for lino-cutting. Lino stamps or blocks may on occasion be cut with a pen-knife, or an excellent knife for the purpose may be made from a steel knitting needle. But these expedients are not as a rule practicable for regular work with a large class.

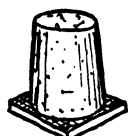
The special lino-cutting tools shown in 2 are very suitable for school work. Five shapes can be obtained, any of which can be slipped into the one handle: the knife, which is shown in the handle in 2a; two V-tools, and two curved gouges, which have cutting edges shaped as in 2b.

Of these the knife is by far the most useful, and this and the smaller gouge will suffice for practically all lino-stamp work and for small lino-blocks. When lino-block work is developed at a later stage the V-tools and the wider gouge will be needed.

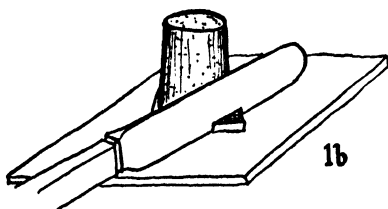
Some workers use a V-tool in preference to a knife for cutting grooves, outlining shapes, etc. It may be more convenient for large work, but for small lino-stamps the knife is better. Finer and sharper curves can be cut with it; also it can easily be sharpened, whereas a V-tool is difficult to sharpen, and will cause much bad work if it is blunt.

These lino-cutting tools are often sold in sets, but can also be obtained separately from more than one British maker.

DECORATION AND LETTERING



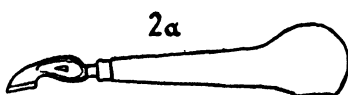
1a



1b



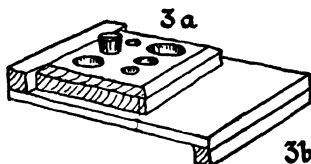
1c



2a



2b

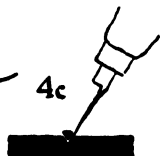


3a

3b



4a



4c



5a



5b



4b



4d



6



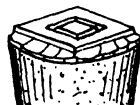
7a



7b



7c



7d



7e



7f



7g

In order to hold the cork firmly while the lino is being cut, a perforated cutting block (3a) is desirable. It is simple and can easily be made by the pupils in a school handicraft workshop. If holes of $1\frac{1}{4}$ ", 1", $\frac{7}{8}$ ", $\frac{3}{4}$ ", $\frac{5}{8}$ " and $\frac{1}{2}$ " are bored in it all the common sizes of corks can be used with it. To allow children to attempt to cut lino-stamps on tiny pieces of lino not fixed on corks, or on the lino-faced corks held in the hand, is a risky proceeding, with danger of cut fingers.

For additional safety it is wise to use the cutting block on a holding board, as shown in 3b.

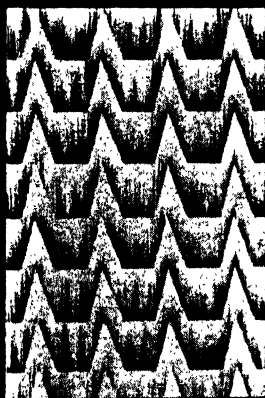
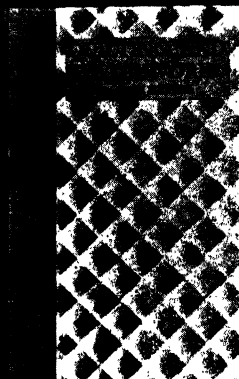
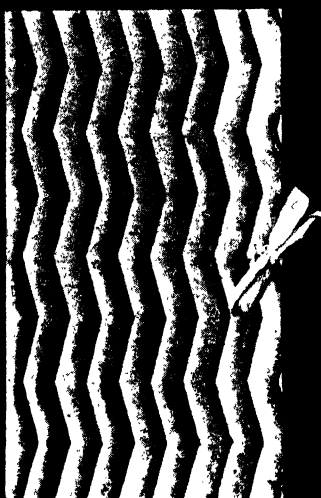
Marking the design. Before cutting it may be necessary to mark the design of the unit on the lino. The word "may" is used advisedly, because as far as possible it is best to work with the minimum of preliminary drawing, or with none at all. If an elaborate drawing is made it will probably be found impossible to follow it out exactly with the knife, but if the tool cuts are allowed to "design" the unit with the minimum of guiding lines the result will at least be a unit which is appropriate to the method employed. In brief, the design should be one that naturally develops from the cuts which it is possible to make quickly and well with the tool. Unless a unit can be cut with a few direct and confident strokes it is best avoided as an unsuitable design for this medium.

For such marks as may be necessary, such as outline shapes, centre lines, etc., the simplest way is to rub the surface of the lino with white chalk, and to mark on this lightly with a pencil. Care must be taken not to press the pencil point into the lino and so injure its printing surface, which must be perfectly flat.

Alternatively, if it is desired to draw the design in mass on the lino, it may be blocked in with a camel-hair brush and Chinese white.

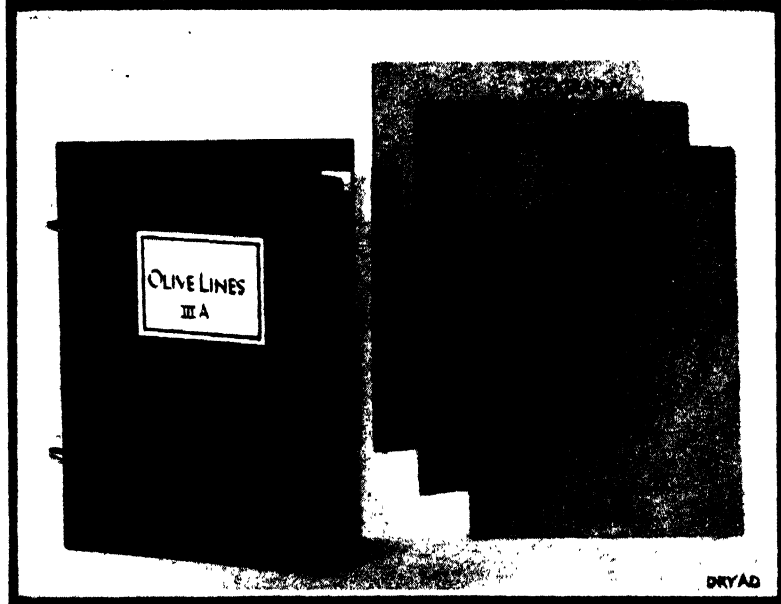
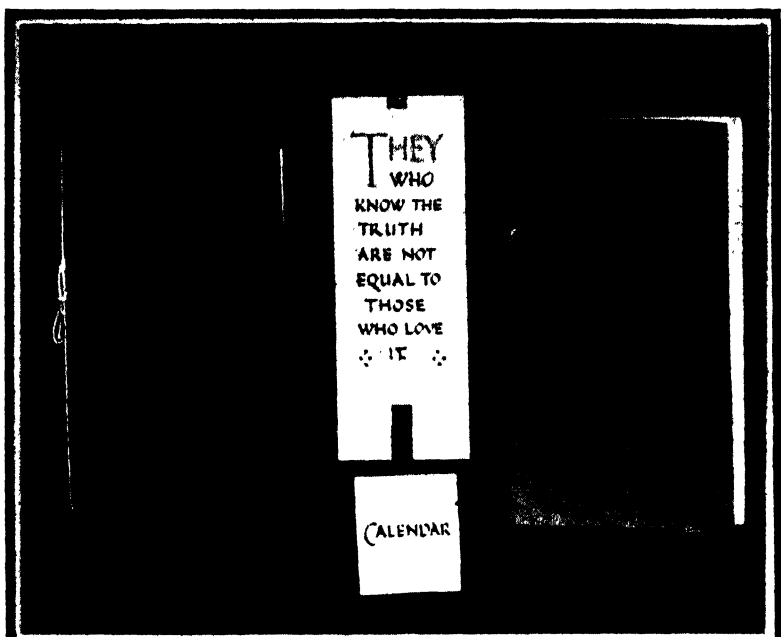
Cutting. The cork being held in the perforated block is now ready to cut. The use of the knife is shown in 4a. It is held with the handle in the palm of the right hand, and with the right forefinger pressing on the back of the blade. The left hand steadies the cutting block, being held well clear of the knife. The tip of the knife is drawn across the lino towards the worker. All cuts with the knife must be *sloping* at an angle of about 60° with the printing surface, and to the right of the worker, as these knives are sharpened for use in the right hand.

A section of the first cut is shown in 4b. For the second cut the block is turned round so that again the tool is sloped to the



Edge-stencilled patterns

PLATE XVII



Constructive Work: Fourth stage

right, and the cut is made to meet the first, as in 4c. If the cut has been made correctly a tiny V-shaped sliver of lino will detach itself, and can be brushed aside with the left hand. The cut need not be more than $\frac{1}{32}$ " deep (4d); a deeper cut will need greater force in the cutting.

The making of this V-groove is the fundamental exercise in lino-cutting. The edges of the printing surface must always slope away from the top, as in the section in 5a. A square-edged printing surface (5b) will be liable to break away at the edges; there is a risk of undercutting and still further weakening it, and such a block will catch the colour from the brush and make clean printing impossible.

For making a curved cut the knife is kept at the same angle with the printing surface throughout the cut.

When making a sharp curve it may be easier to turn the cutting block, cork and all, with the left hand and to keep the knife still. A small round hole or dot is cut similarly by inserting the point of the knife and rotating the block. A small square or triangular hole is cut by making four or three cuts sloping inwards (6). Tapering grooves are useful for leaf serrations, veins, etc.

Having outlined the main masses of the printing surface with these V-shaped cuts, the waste lino, *i.e.* the ground which is not to be printed, is removed with the small gouge. Then any minor cuts or serrations to enrich the unit are made.

Last of all the rounded sides of the cork are cut away with a penknife or table knife while the cork is still in the cutting block, thus shaping the cork roughly to the shape of the unit. This will be found to be a great help when printing, for if the cork is left round it is most difficult to judge the position of the unit and to place it properly in the pattern.

The steps in cutting a lino-stamp to print a simple unit are shown in 7a to 7g.

A number of simple units which have been cut in this way are shown in 8 (p. 165); the possibilities of variety are infinite.

Printing with lino-stamps. Lino-stamps are used in exactly the same way as printing sticks, but since their units are more complex greater care is needed when applying the colour, to avoid filling up the small gaps and lines in the pattern. To obviate difficulty in placing the units in the pattern, it is well to mark on the top of the cork the centre line and rough shape of

the unit beneath it (g), and to carry the centre lines down the sides of the cork. Ink marks are best for this.

Types of patterns. Plate XVI shows four patterns printed with easy lino-stamps. Geometrical units such as those in patterns a and b are the easiest to start with; then very simple natural forms such as the leaf in pattern c may be attempted. Pattern d is an example of the use of two blocks for the one unit; one for the sails and the other for the hull of the ship. This pattern is printed on a paste-coloured combed ground, giving an effect which is both realistic, and thus attractive to children, and yet, merely by conforming to the limits imposed by the process, is suitably conventionalised. There is a wide field for experiment in "topical" and "realistic" patterns of this character, to be used as cover papers on books of which the titles suggest a suitable motive for the design, and on programmes, Christmas cards, etc.

If the limits imposed by the tools and materials are observed no difficulty will be found in conventionalising many simple pictorial forms, such as the ship in the example shown. The first essential is that the pattern must *obviously* be one printed from hand-cut stamps; as a secondary consideration it may suggest, or be inspired by, natural or other pictorial forms. More difficult patterns of this type are shown at a later stage, in Plate XXI.

Printing on cloth: the use of printer's ink. During this Stage the pupils may be introduced to the use of printer's ink, which is necessary for printing upon any bookbinder's cloth excepting the soft matt surface variety. Although an essential process in book crafts, needed particularly for titling in the later stages, and desirable for occasional pattern printing, it is not advisable to apply it too widely, for two reasons: First: special brushes must be set aside for printer's ink, the distribution of the ink to a class is troublesome, and the cleaning-up process is likely to be messy. Second: a good deal of care is needed in preparing and applying the ink so that the imprints will dry in a reasonable time. Any excess of ink on the imprint will remain sticky for a long while. For this reason only small units, widely spaced, should be used in printer's ink patterns.

The ink is applied with a short bristle brush as for water colour. It is advisable to set aside special brushes, to be used for no other purpose, as the turpentine used in cleaning renders them unfit for water-colour work.

A very small quantity—hardly more than a smear—of ink is put on to a small piece of glass. Close by is a tin-lid or saucer containing a few drops of turpentine. The merest touch of the brush in the turpentine will moisten it sufficiently for the ink to be worked out in a thin layer on the glass. From this layer the ink is picked up with the brush as required and applied to the printing stick or stamp. Too much turpentine will make the ink thin, so that it will not make an opaque imprint; too little will leave the ink stiff and difficult to work with the brush.

Brush, glass and stick or stamp must be cleaned with turpentine after use. Sticks or lino-stamps that have been used with printer's ink will not readily pick up water-colour unless the greasiness due to the ink is cleaned off with soap powder or methylated spirit. The pattern on the book in Exercise 5, Plate XV, is worked with printer's ink.

Paste-colour work: Dry stamping. Dry stamping is a quick method of producing pleasant patterns for cover papers. The method consists of preparing a paste-coloured surface, as for combing (p. 136), and, before it is dry, of impressing a dry printing stick or lino-stamp upon it. Some of the colour adheres to the stamp and is removed with it, leaving a unit which is lighter but of the same tone as the paste-coloured ground. The stick or stamp must be wiped clean with a rag between each impression. Since this method does not admit of ruled lines or frameworks being drawn, and since it must be completed *very quickly*, the patterns produced must be simple and the units spaced entirely "by eye".

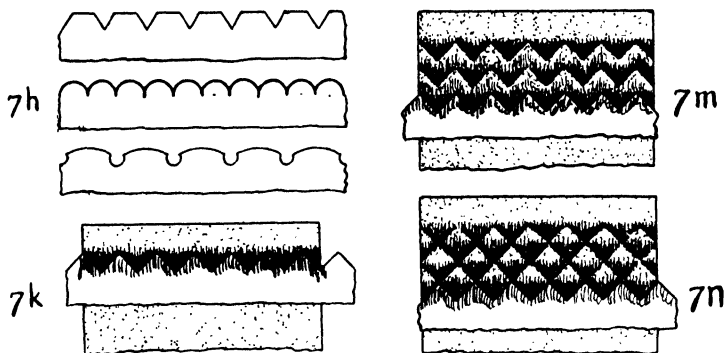
Plate XIVb shows two patterns dry-stamped with simple lino-stamps.

Edge Stencilling. This simplified form of stencilling is much easier than working with closed stencils (see p. 189) as the edge stencils can be cut with scissors. It will be useful at this stage in the production of patterns such as those in Plate XVII.

The first step is to mark out and cut one edge of a piece of stiff paper to the profile required. A great variety of simple patterns can be cut with scissors (7h). Oiled stencil paper is best for the purpose, but 80-lb. manilla will serve, though it is not so easily washed clean after use. The stencil strip should be cut long enough to go right across the paper on which the pattern is to be made.

A stencil brush (6, p. 185) and colour are also needed. A drop or two of water, transferred with a camel-hair brush as required

to a clean palette or a piece of glass, will serve to moisten the stencil brush from time to time. The colour is picked up by dabbing the stencil brush either on to a cake of colour in a paintbox, or on to a smear of tube water-colour in a palette.



Great care must be exercised not to pick up too much colour or to have the brush too moist.

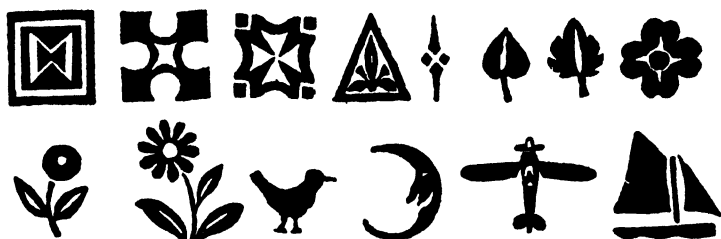
The stencil is held on the paper with the fingers of the left hand, and the pattern made either by dabbing the brush lightly over the cut edge, giving a graduated stippled effect (see patterns in Plate XVIIa and on right of Plate XVIIb) or by dragging the brush over the edge of the stencil. (See pattern on left of Plate XVIIb.) In the latter method the brush must be dragged from the stencil to the paper, and never towards the edge of the stencil.

The first row of the pattern being made, as in 7k, the stencil is moved down the paper, taking care to keep it parallel to the pattern, and a second row of pattern is stencilled (7m). A different effect may be obtained by moving the stencil to the right or left in alternate rows (7n).

LETTERING

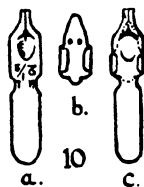
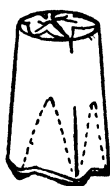
At this stage the pupils should be ready to use the broad pen, which makes lettering of a more decorative character than the narrow-pen lettering hitherto practised.

The art of lettering and manuscript writing is of great antiquity, and is capable of development to a very high stage of artistic excellence, so that it may properly form part of the art training of the school.



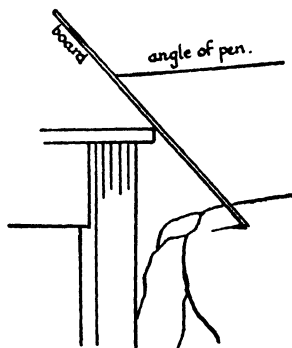
8

9



10

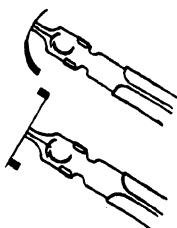
11



13a



13b



HE
HO
OC
AD
RA

14

MINNOW AUTUMN LANE
MINNOW AUTUMN LANE.

15

As far as its application to book crafts is concerned, all that is necessary is for the pupil to know how to manipulate the broad pen so as to prepare, with due regard to letter form and spacing, such simple titles, names, etc., as may be required for labelling his products appropriately. If he goes further in the practice of fine lettering he will have abundant scope for his abilities in the writing of decorative wording for Christmas cards, calendars, etc.

The broad pen. Whatever type of broad pen may be favoured by those who do much lettering, undoubtedly the most convenient for the novice for the incidental purposes of book crafts is the steel manuscript nib shown in 10a. It is cheap and can be used in the ordinary school penholder. A broad nib holds much ink, which may run into a blot unless a reservoir is used. Detachable reservoirs, to fit any broad nib, are shown in 10b; they are slipped over the nib as 10c. Several British makers supply nibs of this kind, usually in sizes ranging from No. 1 (about $\frac{7}{16}$ " wide), through No. 1½, 2, 2½, etc., to No. 6 (about $\frac{3}{2}$ " wide).

For lettering from $\frac{1}{4}$ " up to $\frac{3}{8}$ " high—the sizes most commonly needed in book crafts titles—nibs Nos. 3½, 3, and 2½ will be most useful.

These nibs may be obtained with the ends cut square across or cut slightly oblique. The square-ended form is favoured by many teachers for beginners to use.

The main difference between the positions of hand and paper in narrow and broad pen writing is that in the latter the paper should be held on a board sloping towards the writer at an angle of about 45°, the pen being almost horizontal, but with the holder pointing back towards the right-hand side of the writer (11).

The writing board. For school work a convenient writing board is the 15" × 12½" strawboard recommended for cutting boards. The paper should be pinned or clipped to the board. If the writer sits back with the board resting on his knees and leaning against the table, as in 11, the board can easily be steadied with the left hand in the best position for writing.

Alphabet for broad-pen writing. A suitable alphabet for broad-pen writing is shown in 12. The forms of the capitals, as in the narrow pen alphabet, are based on the forms of the Roman lettering shown in 9, p. 191.

Practice strokes. Before attempting to reproduce these letters the pupils should practise the fundamental strokes shown in 13a.

A B C D E F
G H I J K L M
N O P Q R
S T U V
W X Y Z

a b c d e f g h i j k l m n
o p q r s t u v w x y z.

1 2 3 4 5 6 7 8 9 10



12 continued

All the strokes (with one exception—the thin stroke of the “X”) are made *downwards*, keeping the pen at a constant angle as in 13b.

Once these strokes are mastered they can be combined to form the various letters. No attempt should be made to carry the pen right round the “O” or other round letter in one stroke; the letter must be made with two downward strokes.

The suggestions concerning writing fluids, and setting-out, on pp. 108-9, apply equally to broad-pen lettering.

Spacing of letters. To achieve legibility and beauty in broad-pen lettering, each letter should appear to “carry with it” about the same amount of white background. If the letters are spaced at exactly equal distances those with upright strokes will appear to be closer together than those which “carry” a lot of white background with them; *i.e.* the letters with curved or sloping strokes. This is exemplified in the upper line of 15 (p. 165). In “MINNOW” the first four letters appear closer than the others; in “AUTUMN” the “T” appears detached; and in “LANE” the “LA” seem to be further apart than the “NE”.

To make the word leap to the eye as a coherent whole and not as a row of irregularly spaced letters, it should be written as in the lower line of 15.

This may be summed up by saying that two vertical strokes should be spaced furthest apart; a vertical stroke and a curve closer; two curves closer still; and a vertical and a slope, or two sloping strokes in opposite directions, closest of all (14). The capital “T” should always be placed close to its neighbours as it carries much white background with it.

CHAPTER 13

Fourth Stage—Types of Constructive Work

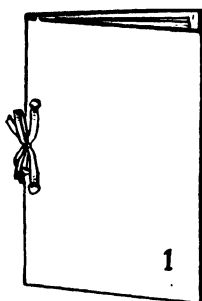
CHRISTMAS CARD AND PROGRAMME—CALENDAR—RINGED EXERCISE BOOK—SUBJECT FILES FOR USE WITH RINGED BOOK—READING CASE FOR LARGE THIN MAGAZINE—PAMPHLET-SEWN BINDING—SQUARE-BACK READING CASE FOR THICK MAGAZINE—TAPE-SEWN BINDING FOR A THIN BOOK—LOOSE-LEAF ALBUM WITH SCREW BINDERS—POSTCARD ALBUM.

I CHRISTMAS CARD AND PROGRAMME. (Plate XVIIIa.)

Only one Christmas card is shown, at the left-hand of Plate XVIIIa. It is of Type C (p. 81) decorated with lino-stamps and coloured lettering done with a broad pen. During this stage the advance made in the mastery of decorative processes and lettering can be applied as required to Christmas cards and calendars of any of the types already described.

Type E. Programme. (Right-hand of Plate XVIIIa.)

This is similar in construction to the Christmas cards, but is larger, and is suitable for programmes for various school functions. The specimen shown is lettered with the broad



pen and decorated with a simple lino-stamped pattern. As the pupils progress in lino-block work the title could be printed from a block, or a single block could be cut to include title and decoration.

Cover: 1 pc. pastel paper Cr. 4to, cut to $9'' \times 7''$.

Leaves: 1 or 2 sheets plain exercise paper, trimmed, F'cap. 4to. A rather larger programme can be made by using the Cr. 4to cover sheet without cutting it; in this case the leaves can be made either from Crown sheets of printing paper folded 8vo, or from trimmed Large Post 4to exercise paper ($10'' \times 8''$) cut to $9\frac{1}{2}'' \times 7''$.

After leaves and cover have been folded and put together the back may be punched and tied as 1. This is more

economical than the full length tie used in Christmas cards. Alternatively the programme could be sewn with thread.

2 CALENDAR. (Centre of Plate XVIIIa.)

Only one calendar is shown for this stage, but any of the types previously described may be used to carry decoration and lettering appropriate to the pupils' present abilities. The specimen shown is similar to Type B (p. 81) but has the calendar suspended by a ribbon.

Type J.

- 1 pc. tinted board or thick cover paper $6\frac{1}{2}" \times 2\frac{1}{2}"$; Roy.
- 16mo cut down the centre as for Type B.
- 1 small calendar and about 12" of ribbon.

When the board has been cut and lettered and the calendar prepared, cut transverse slits with a knife at top and bottom of board, and thread the ribbon through them. The ribbon may either be similarly threaded through the calendar back, or pasted to it.

3 RINGED EXERCISE BOOK. (Plate XVIIIb, bottom left-hand.)

This book, and the manilla files which follow, are the senior school counterparts of the laced exercise book and files made in the junior stage (p. 123). One ringed book with index cards can be stocked with various rulings of exercise paper and used for all written work, the used sheets being periodically transferred to the manilla subject files. The book is made to take trimmed F'cap. 4to exercise paper. It is the first example of half-binding in the course.

Boards: 2 pcs. 16-oz. strawboard $9" \times 7"$.

Cloth: Back, $10" \times 3"$; Lining $8\frac{3}{4}" \times 3"$; Corners $13\frac{1}{4}" \times 1\frac{1}{2}"$.

Cover paper: 2 pcs. single Duxeen (or pastel paper) $10\frac{1}{2}" \times 6\frac{1}{2}"$.

Linings: 2 pcs. pastel paper Cr. 4to.

Leaves: F'cap. 4to trimmed exercise paper as required.

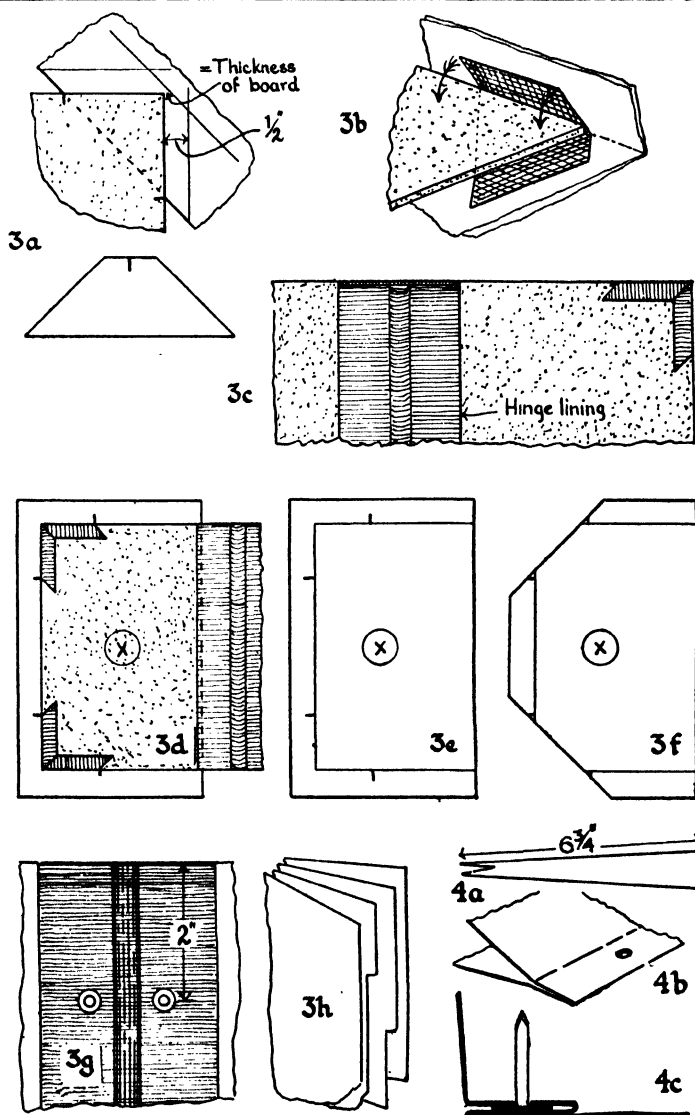
Index sheets: 4 or more cut from Cr. 4to 80-lb. manilla paper.

2 1" rings and 4 eyelets are also needed.

Steps:

- 1 Cut boards to $9" \times 7"$, and mark 2" in from the front corners of each. Lay one corner on a piece of paper and

TYPES OF CONSTRUCTIVE WORK



- 1 set out and cut pattern for cloth corner (3a). Cut out 4 cloth corner pieces with this pattern as described for the Blotter (p. 143). Mark the centre of each piece.
- 2 Paste a corner piece, lay on clean waste paper, and bind the corner of the board as 3b, tucking in the mitre carefully. Repeat with the other three corners.
- 3 Complete the back as for a quarter-bound case, using a thin stiffening paper between the cloth back and lining (3c).
- 4 Cut 2 cover papers to allow $\frac{3}{4}$ " turnover. Mark the hinge lining and lay board in position (3d). Draw round the board, also make marks where the cloth corners come. Remove board, when the paper is seen to be marked as 3e. Cut off the corners as 3f, allowing $\frac{1}{8}$ " for paper to overlap cloth.
- 5 Cover the boards exactly as for quarter-bound case, except that this time there are no mitres to deal with. Line each board and dry under pressure.
- 6 Set eyelets as 3g, using saddler's punch and two-piece eyelet closer (p. 61).
- 7 Cut index sheets from manilla paper as 3h. Make punching gauge and punch index sheets and leaves to fill the book.

Decoration and lettering: Probably no decoration will be considered necessary. The label may be lettered with a broad pen, or a block-printed name or initial may be used

- 4 SUBJECT FILES FOR USE WITH RINGED BOOK. (Plate XVIIIb, right-hand, shows a set of files; Plate XIXa, right-hand, shows a file open.)

Several of these will be needed, one colour for each subject.

- 1 piece 100-lb. or 120-lb. manilla, Cr. Folio cut to $15" \times 8\frac{3}{4}"$. 2 $1"$ or $1\frac{1}{2}"$ "Tower" Binders.

Steps:

- 1 Cut the paper to $15" \times 8\frac{3}{4}"$ and fold as 4a.
- 2 Turn the covers back, and using same punching gauge as for ringed book, punch as 4b.
- 3 Paste one face of the centre fold, insert 2 "Tower" Binders, and press down fold as 4c. Dry under pressure with a thick pad of paper over the binders.

Lettering: Letter each cover with name, form and subject.

5 READING CASE FOR LARGE THIN MAGAZINE.
(Plate XIXb, left-hand.)

There is nothing new in the construction of the cover, which is a simple quarter-bound case, except that so large a size has not yet been attempted. The boards should be cut from 24-oz. or 32-oz. strawboard, $\frac{3}{4}$ " longer and $\frac{3}{8}$ " wider than the size of the magazine to be covered. Cloth, cover paper and lining for quarter-binding, 4 eyelets and a length of double twist cotton cord are needed.

Steps:

- 1 Make the quarter-bound case. The distance apart of the boards at the back should not be more than $\frac{1}{2}$ " as the method of lacing is unsuitable for thicker magazines.
- 2 Fix eyelets at head and tail of boards and lace as 5. This method is very satisfactory for large thin magazines, as the lace does not drag on the cloth back, and the minimum of lacing is shown on the outside of the case.

Decoration and lettering: This may be as elaborate as the article demands. Covers of this kind often offer opportunities for "topical" motives in design, either printed or stencilled. A stencil was used for the cover in the specimen. The label was printed from a lino-block cut from the pattern of the printed letters on the magazine.

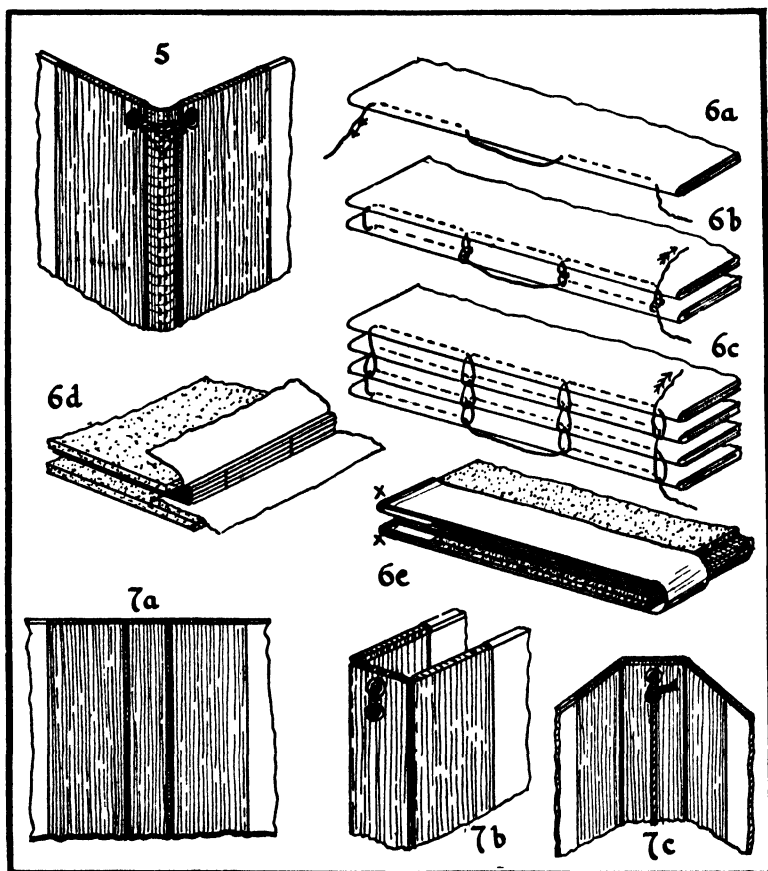
6 PAMPHLET-SEWN BINDING. (Plate XXa, left-hand.)

This is the first example of multi-section binding. "Pamphlet sewing" consists of stitching the sections so that they hold to one another by means of the thread alone. It is obviously suited only for very thin and light books and is best not used for more than four sections.

Pamphlet sewing is here used as a means of getting the four sections into one; the whole is then treated as a single-section book, sewn through to mull and bound as in previous exercises. The book shown in the photograph is one of the excellent little "Picture Books" issued at 6d. each by the Victoria and Albert Museum, and is a good example of the kind of small book which is worth binding in this way. Binding so small a book on tapes, as in the next binding exercise (Exercise 8, p. 176), would be likely to make the back thick and unsightly. This example is bound in full cloth boards.

Steps:

- 1 Separate, clean, and if necessary repair, the sections.
- 2 Mark the sections as for 3-stitch or 5-stitch sewing. For beginners it is wise to pierce the sections very lightly with a needle before sewing: this avoids difficulty in placing the needle.



- 3 Pass the thread through the first section as 6a. Then pass it in at the tail of the second section, out at the second mark, and knot it round the thread on the first section (6b). It is then passed back into the second section and out at the third hole, where it is again knotted to the first section. This is repeated at the fourth hole, then the

TYPES OF CONSTRUCTIVE WORK

thread is brought up and enters the third section at the head. This process is repeated with each section that is added, the ends of the thread being finally knotted back to the preceding section.

The path of the thread through a book of four sections is shown in 6c, except that for clearness the knots are omitted.

- 4 After the book has been sewn put a little paste on the back and rub it well into the joints between the sections with a folder. This may be done in a press if one is available; if not it may be done between two pieces of strawboard as 6d.
- 5 From now on forward the book exactly as a single-section book. Prepare fly-leaves and end-papers as for Exercise 8, p. 149, and sew the centre section through to the mull. If a book of four fairly thick sections is being bound it may be wise to sew the two end sections instead of the centre one to the mull.
- 6 Proceed as far as fixing the boards (p. 151). For a full cloth cover the width of the cover should be measured as 6e. To the distance x.x. when the paper is spread out $\frac{1}{2}$ " should be added at each end for turning in. Allow also $\frac{1}{2}$ " at head and tail for turning in.
- 7 Paste cloth, lay on waste paper, place book in position with boards lying open, and turn in head and tail as 8f, p. 150. Then tuck in mitres and turn in fore-edges. Put tins or waste sheets inside the boards before pressing.
- 8 When dry, paste down the end-papers and again press.

Decoration and lettering: If desired the cover may be decorated with a small pattern in printer's ink. Label appropriately. In the specimen shown the label was cut from the original paper cover of the book.

7 SQUARE-BACK READING CASE FOR THICK MAGAZINE. (Plate XIXa, left-hand, and Plate XIXb, right-hand.)

This type of case is necessary for all but thin magazines, where the type of lacing shown in Exercise 5, p. 173, can be used. If the lace is to be passed through the *back* and not through the boards it is essential to have a strip of board in the back, otherwise the lace will drag the cloth back out of shape. The method of lacing shown here has the minimum of lace on the outside of the case, and is neat as well as strong.

Boards and back strip should be cut from 16-oz. or 24-oz. strawboards; the boards 1" longer and $\frac{3}{8}$ " wider than the magazine; the back strip the full thickness of the magazine. Cloth, cover and lining paper, four eyelets and length of double-twist cotton cord are needed.

Steps:

- 1 Cut boards and strip to size, and make the case with the back as in 7a. Set the hinge lining as described on p. 70.
- 2 Fix eyelets and lace as 7b and 7c, which show the outside and inside of the finished case.

Decoration and lettering: These may be as elaborate as is desired. The specimen shown in Plate XIXa is covered with a ready-printed patterned paper; that shown in XIXb has a pattern printed with a large lino-stamp, and a label lettered with broad pen in the same colour as the pattern.

8 TAPE-SEWN BINDING FOR A THIN BOOK.

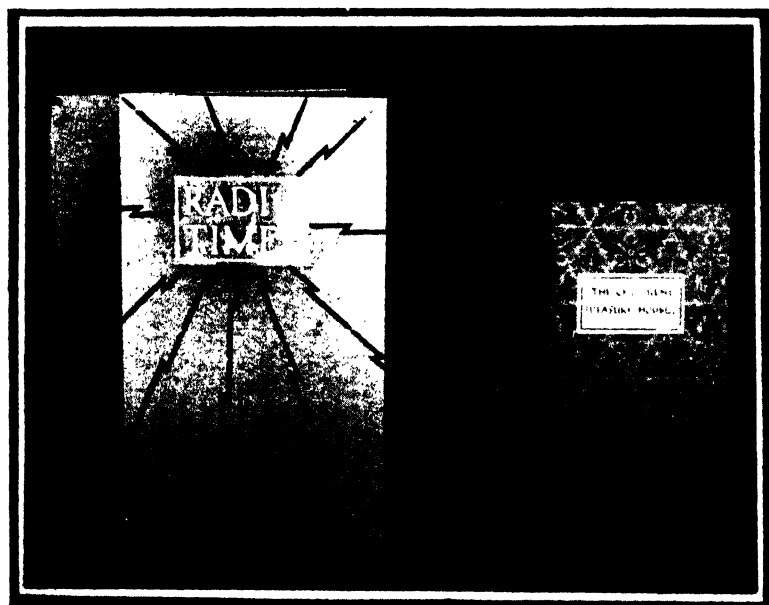
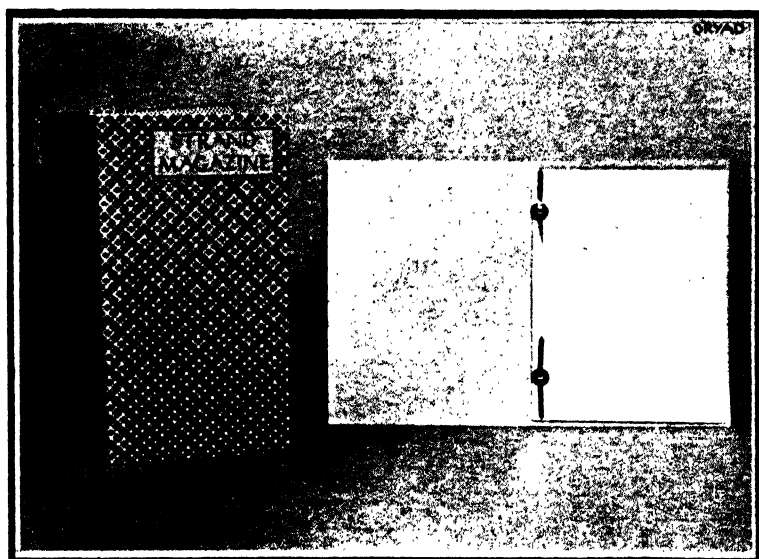
(Plate XXa, right-hand.)

This exercise is an important "milestone" in the pupils' progress towards bookbinding proper, for it introduces two new and fundamental features. One is the process of sewing a book on tapes, an operation which is widely used in book-binding. It is practicable to sew a book of a few sections on tapes without using a sewing frame, if the tapes are stiffened with glue. The other new process is the use of end-papers folded and put in as extra sections, so that on throwing a cover open the end-paper is seen as a continuous sheet right across the hinge. At this stage the end-papers are folded simply, and not made up in the special "zig-zag" form described later, nor are they sewn in.

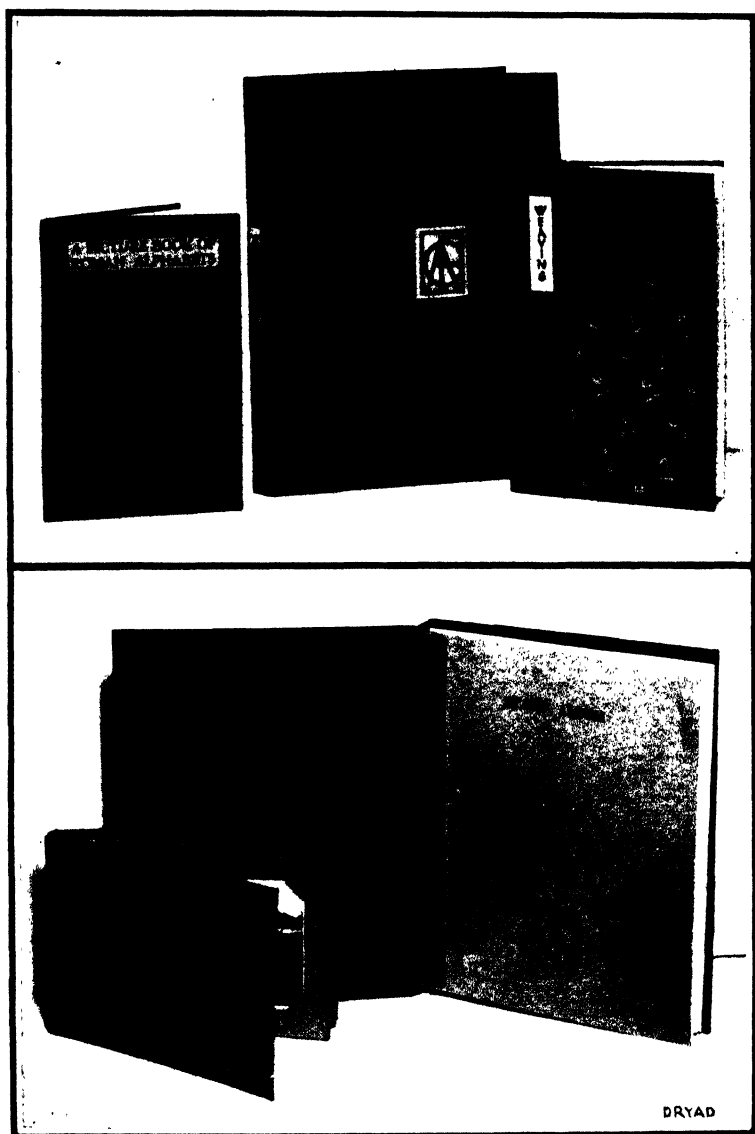
For the first attempt at this style of binding a small book of not more than 6 or 8 sections should be chosen.

Steps:

- 1 Stiffen a length of about 6" of tape, $\frac{1}{2}$ " wide, by brushing glue or "Seccotine" into it and hanging it up to dry.
- 2 Separate, clean, and if necessary repair, the sections of the book to be bound. If possible, place the sections under heavy pressure until needed for sewing.
- 3 Mark the top section with the positions for the stitches as 8a. The "kettle-stitch" mark should be $\frac{1}{2}$ " or $\frac{3}{4}$ " from head and tail, according to the size of the book. Lay the



Constructive Work: Fourth stage

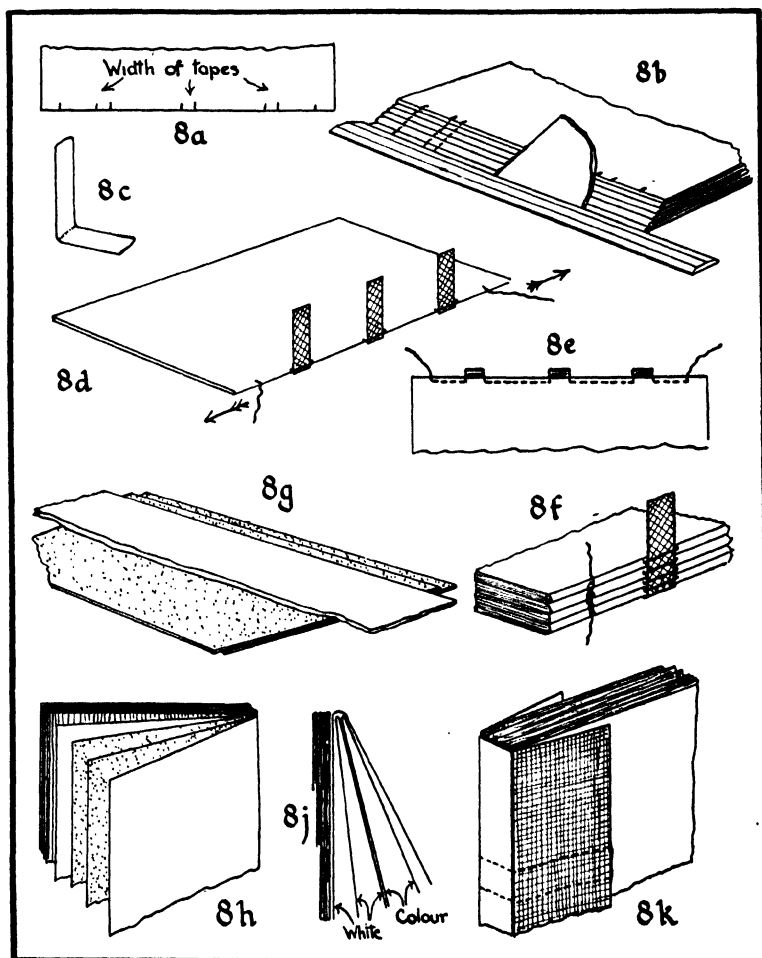


Constructive Work: Fourth stage

PLATE XX

TYPES OF CONSTRUCTIVE WORK

sections as 8b, aligning them carefully at head and tail, and use a set-square or folded paper as shown to rule the marks across every section.



- 4 Cut each stiffened tape long enough to go across the back of the book and $1\frac{1}{4}$ " on to each side, and bend it as 8c.
- 5 Before sewing, pierce each section very lightly with the needle at the marks. After a little practice in sewing this step may be omitted.

- 6 Place the first section of the book face down on the tapes for sewing as 8d. Put the left hand inside the section and use it to pass the needle out of the section. As each section is sewn the next one is placed above it, taking great care to keep the sections the right way up, in their proper order, and properly aligned.

The path of the thread in sewing is shown in 8e, from which it will be seen that the thread always enters, and finally leaves, each section at the kettle stitch. Each section is knotted to the preceding one at the kettle-stitch before passing the thread into the next section (8f). The thread when brought out of the last section is knotted to the kettle-stitch immediately below it.

As each section is sewn the thread is pulled tight in the direction of the arrows in 8d.

- 7 Prepare two sets of end-papers as follows: take two pieces of coloured paper twice the size of the book, and fold them across. Have ready two similarly folded pieces of white paper. Using a pasting guard as 8g, paste the two coloured papers for about $\frac{1}{2}$ " along the fold, place a white sheet round each, and rub down. Each end-paper is then as 8h, which shows one in its position on the book.

Note: This, the simplest method, leaves the back of the coloured leaf exposed, facing towards the book. If it is desired to cover this with white, an additional folded fly-leaf is put in, one side of it being pasted on to the back of the coloured leaf, as 8j.

- 8 The coloured papers, pasted at the fold in Step 7, are said to be "tipped" to the white papers. In a similar way, "tip" the white fly-leaves to the book at each end, as in 8h.
- 9 Place the book between waste strawboards, if possible in a press, and rub hot glue into the back, working it well into the joints between the sections. Avoid excess of glue. Small books can be done similarly with strong paste, as in Exercise 6, Step 4, p. 175.
- 10 Paste the tapes down on to the waste end-papers, and mull the back over the tapes. When dry, cut off the waste end-papers up to the mull, as in Exercise 8, p. 151. Cover the back with a strip of tough paper, if necessary building up below it with strips of paper between the

TYPES OF CONSTRUCTIVE WORK

tapes, to make a smooth back. The back now appears as 8k.

- 11 When the book is dry trim the edges in the trimming press. From now on the completion of the book in quarter-bound, half-bound, or full cloth boards is exactly as in previous exercises.

Decoration and lettering: Any of the processes so far practised for the making of patterned papers can be applied to the decoration of books bound in this way. For choice books the end-papers as well as the covers can bear special decoration, paste-coloured or pattern-printed. The example shown has a dry-stamped paste-coloured cover.

Label as desired. The example shows a label lettered with broad pen, reading from top to bottom—a device that may occasionally be effective. Books bound in this way may well be titled with labels printed from single type as described in Chapter 14.

- 9 LOOSE-LEAF ALBUM WITH SCREW BINDERS. (Plate XXa, centre, shown closed. Plate XXb, right-hand, shown open.)

This is the first example of the use of screw binders, and also of a loose-leaf book in which the binding device is entirely concealed when the book is closed. It is a neat strong form of binding, very useful for books in which the number of leaves is constant, and in which the leaves need only occasional rearrangement, as in albums of various kinds. It makes a most attractive stamp album, the spare leaves being bound in at the back and brought forward into place as required by the growth of the collection. The book is "stubbed" by fixing cardboard strips to the backs of a few leaves; this facilitates opening as well as allowing for the expansion of the book in use.

Boards: 2 pcs. 24-oz. strawboard, $10\frac{5}{8}" \times 8\frac{1}{4}"$.

Back: 1 pc. 24-oz. strawboard, $10\frac{5}{8}" \times \frac{3}{4}"$.

Hinge strips: 2 pcs. 6d millboard, $10" \times \frac{3}{4}"$.

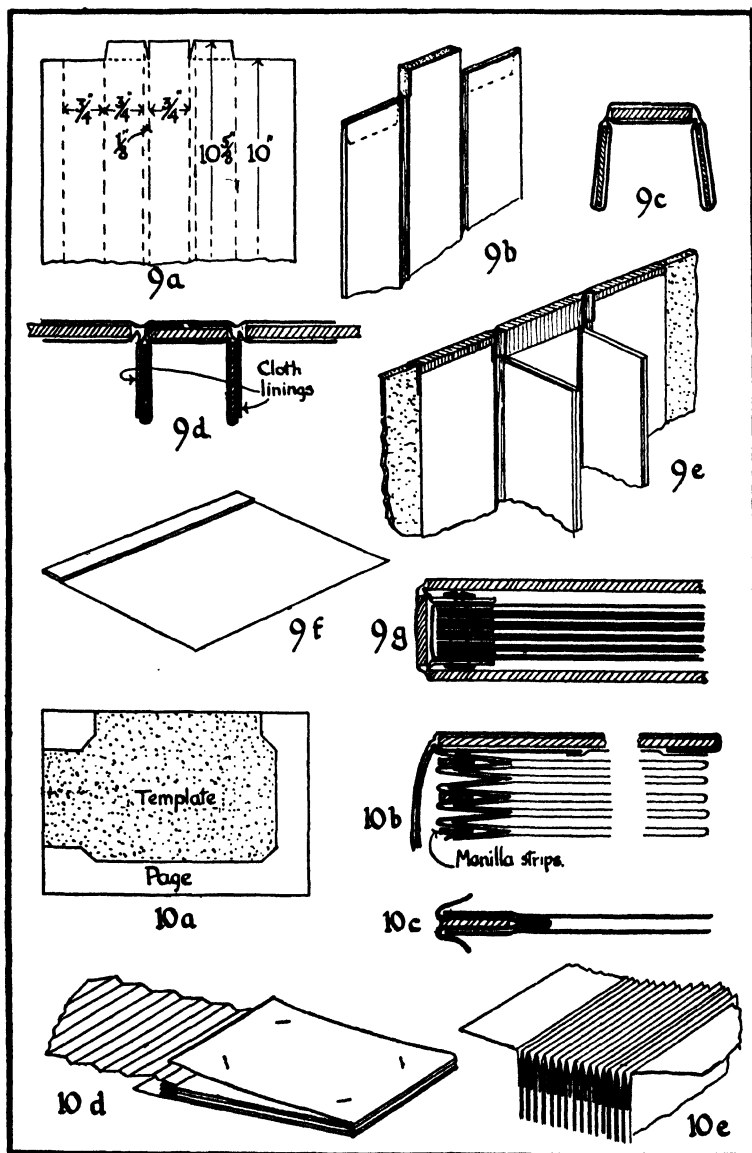
Cloth, Back: 1 pc. $11\frac{1}{4}" \times 4\frac{1}{2}"$.

Corners: 1 pc. $14\frac{1}{2}" \times 2\frac{1}{2}"$.

Hinge: 1 pc. $10\frac{5}{8}" \times 4\frac{3}{4}"$.

Linings: 2 pcs. $10\frac{3}{8}" \times 2\frac{5}{8}"$.

Cover Papers and Linings: out of 4 Cr. Folio pieces pastel paper.



TYPES OF CONSTRUCTIVE WORK

Inner Covers: out of a Crown sheet of 80-lb. manilla paper.

Leaves: Plain exercise paper. L. Post 4to trimmed, 10"×8".

Stubs: 1 pc. 6-sheet white card about 10"×4".

Two $\frac{3}{4}$ " screw binders are needed.

A rather more economical album can be made if F'cap. 4to trimmed exercise paper is used for the leaves.

Steps:

- 1 Cut boards, back, hinge strips and cloth to sizes as above.
- 2 Set out and cut head and tail of cloth for hinged back as
ga. Paste the cloth, and build up hinges and back together
as gb. The small flaps are turned over the ends of the
millboards before the cloth is turned round the back.
A section of the completed back is shown in gc.
- 3 Mount the cloth corners for the boards, and build up the
case, using the back of the hinge as the square back for the
case as shown in gd (section) and ge.
- 4 Cover and line the boards.
- 5 Prepare 5 or 6 leaves with thin white cardboard stubs,
pasted on, as gf.
- 6 Cut inner cover of manilla paper to fit round the leaves,
as shown in section in gg. Make a punching gauge, and
punch this cover, the leaves, including the stubbed ones,
and the millboard hinge strips. It will probably be
necessary to punch the inner cover with a saddler's punch.
- 7 Assemble the book as shown in section in gg.

Decoration and lettering: Decorate as desired. Lettering can be done with type used singly, both on labels for spine and front cover and on front inner cover. The example shown has a block-printed monogram label on front and inner covers.

10 POSTCARD ALBUM. (Plate XXb, left-hand.)

This is a type of construction specially suited for albums of this kind in which strength and ease of opening are necessary. The leaves are double, folded at the fore-edges, one postcard being mounted on each half of the doubled leaf. The album takes one postcard on each page; larger albums can be made in this way, but it is not wise to start on a large one.

Boards: 2 pcs. 16-oz. strawboard, $7\frac{1}{8}$ "× $5\frac{3}{8}$ ".

Cloth Zig-zag strip: 1 pc. 18"×5".

Cover: 1 pc. $17\frac{1}{4}" \times 6\frac{3}{8}"$.

Linings: both from 1 pc. pastel paper Cr. 4to.

Leaves: 16 pcs. pastel paper or 3-sheet tinted board, $15" \times 5"$. These can be cut from 8 pcs. Cr. Folio folded and cut lengthways.

Steps:

- 1 Fold each leaf, and, using a card template as 10a, mark each page for the slits for the cards. Use the template on a board as described on p. 45. Open out the leaves and cut the slits with knife and straight-edge.
- 2 A section through the back is shown in 10b, 10c showing how one leaf is fixed. Cut and fold the zig-zag cloth strip to take 16 pages, each pleat being $\frac{1}{2}"$ wide. Leave a 1" strip at each end for the hinges. Use the folding method described on pp. 146-8 for Exercise 6 in Stage Three.
- 3 Spread the strip out flat, paste each pleat successively and bring the leaves into position as 10d. When complete dry *without* pressing.
- 4 Cut 9 strips of manilla paper $5" \times \frac{3}{8}"$. When the book is dry get a helper to draw the hinge strips apart so as to open the back of the pleats (10e). Rub paste well into the back of each pleat, and insert a manilla strip into every alternate pleat. Close up the pleats and dry under pressure.
- 5 Prepare the case full bound in cloth boards, to fit the "book" thus made, making the width of the back $\frac{1}{8}"$ wider than the thickness of the pleats, and using a stiff manilla paper liner for the cloth back. Do not line the boards.
- 6 Paste the hinge strips only, and set the book in the cover. Note that the back is hollow and must not be pasted down on to the pleats.
- 7 Line the boards, and dry the album under pressure, building up between the leaves with waste card or paper to bring the boards parallel in the press. The hinge joint is the important part to press.

Decoration and lettering: These may be added as desired. The example shown has a two-block border pattern lino-stamped with printer's ink.

CHAPTER 14

Fourth Stage—Decoration and Lettering

DECORATIVE PROCESSES—Two-stamp patterns—Use of two or more colours—Corner blocks for borders—Lino-block printing: its special uses in book crafts—Marking the design: reversal—Necessity for marking lino-blocks—Two methods of marking reversed lettering—Cutting the block—Cleaning the block—Printing from lino-blocks: applying the colour—Use of brush—Use of roller—Printing: taking the print—Rubbers or “barens”—Dry rolling—Printing in a press—Applications of the process—Other decorative processes: stencilling—Stencil paper—Stencil knives and cutting plates—Cutting the stencil—Colour—Stencil brush—Method of stencilling—Marbling—**LETTERING**—Roman alphabet—The use of printer’s type—Type—Type faces—Type sizes—Method of using the type: the colour—The straight-edge—Making the imprint.

DECORATIVE PROCESSES

The use of lino-stamps of steadily increasing complexity and difficulty should be practised throughout this Stage in the decoration of book crafts exercises. The units may be inspired by simple natural forms, as in the Christmas card in Plate XVIIIa and the pattern in Plate XXIb; or they may have a “topical” or pictorial motive as in Plate XXIc and XXId.

Two-stamp patterns. Two or three stamps may be used for each unit; for instance the pattern in Plate XXIb has one stamp for the flower petals and another for the leaves, the flower-centres being put in last with a small round printing stick.

Except in cases such as this, where small dots or berries are added in a third colour, it is rarely wise to use more than two principal colours for the units of a pattern. The effect of three or more colours rarely repays for the extra trouble of printing them.

Borders may sometimes need a special stamp for turning the corners, as on the postcard album in Plate XXb. The two blocks for this border are shown in 1 (p. 185); the berries are added with a round printing stick.

Lino-block printing. At this stage the use of simple lino-blocks, as distinct from lino-stamps, should be introduced. As has been said, a lino-block in use lies face uppermost, and the paper is pressed or rubbed down upon it when printing, consequently the lino-block is generally unsuitable for printing the units of a pattern.

On the other hand, the lino-block may be of almost any size, and so is most useful for printing labels, whether for titles, names, initials, symbols, or very simple pictures for Christmas cards, calendars, bookplates, etc.

The printing of pictures from lino-blocks is a method of graphic art now much in favour, and capable of development to a very advanced stage. In its application to book crafts the process is limited at this stage of the course to the making of the simple labels mentioned above. If lino-block cutting is practised as a part of the school art course its applications to these purposes may well form an outlet for the early exercises.

It will probably have been noticed during the making and use of lino-stamps that the form of the stamp is the "mirror image" of the unit it prints; *i.e.* the right-hand side of the stamp becomes the left-hand side of the unit, and so on. In such simple, and generally symmetrical, forms as are used for lino-stamps this reversal has mattered not at all; in a picture it may matter a great deal; and in a block containing lettering it is absolutely necessary to correct it. This is done by making the block the reverse of the form it is to print, *e.g.* all the lettering on a block must be cut with the letters backwards, and the words reading from right to left.

When cutting the lino-stamp little or no preliminary marking was advised, but when cutting a reversed lino-block, especially one containing lettering, the shapes to be cut must be first marked, suitably reversed, on the block.

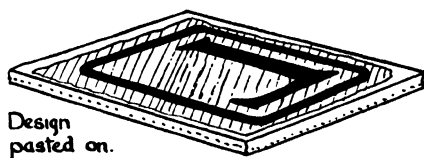
Leaving aside the direct sketching of the reversed lettering on the block, as being far too difficult for children, there are two methods which may be used to achieve this reversal of the design. The first is to block in the design in black or in a colour which will contrast with the linoleum, on tracing paper, using a camel-hair brush. The surface of the linoleum is then carefully pasted, the paste being well rubbed in, and the traced design laid *face down* upon it. Thus the reversed design shows through the tracing paper on the block. The design is then cut *through* the tracing paper (2).

The difficulty of this method lies in the fact that unless the pasting is very well done parts of the traced design, when cut round with the knife, are liable to detach themselves from the lino before the cutting is completed. However, this can be surmounted with care, and the method certainly admits of very accurate marking and cutting.

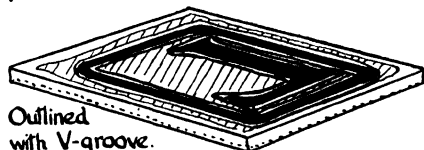
A variation of this method is to use ready-printed lettering for the design. The lettering is pasted face down upon the block. When dry the back of the paper is carefully rubbed away with fine glass-paper until only a thin film of paper, through which



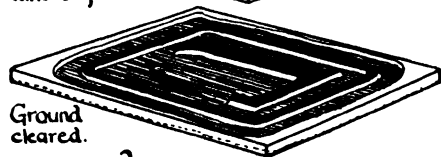
1



Design
pasted on.

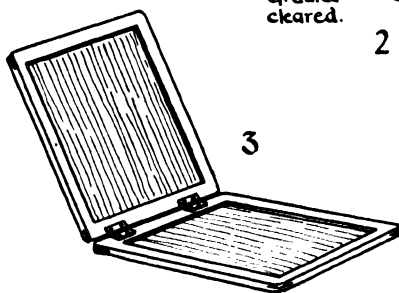


Outlined
with V-groove.



Ground
cleared.

2



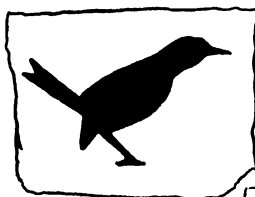
3



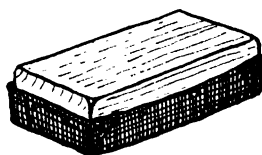
4



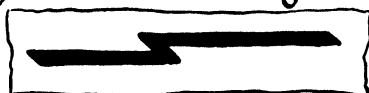
6



7



5



8

the reversed lettering can be seen, is left. A drop of oil rubbed over the paper makes it more transparent. The label for the "Radio Times" reading cover in Plate XIXb was marked and cut in this way, using letters cut from the front page of the periodical. It need hardly be emphasised that if ready-printed lettering is to be used in this way only examples of fine form should be chosen, and those likely to be easy to cut.

The second method of marking out is to block the design as before on tracing paper, and to reverse it and trace it on the surface of the lino-block, using carbon paper. If this is done, unless the lino is of a light colour, it is well to whiten its surface with chalk or Chinese white before tracing.

This has not the disadvantage of the former method, but the design is likely to lose quality and detail in the tracing. It is a quick method most suitable for free pictorial designs where great accuracy is not required.

Cutting the block. The block having been duly marked with the reversed design, it is then cut, using the tools as described on p. 160. For safety in cutting the lino should be laid on a holding board (3b, p. 159).

As in cutting a lino-stamp, the design is first outlined with V-grooves, best made with two cuts of the knife. Then the waste lino is cleared away, using gouges of suitable size. If many V-cuts have to be made it may be an advantage to use a *sharp* V-tool instead of the knife for them.

If tracing paper has been stuck on to the block, it must be washed off after cutting is completed, taking care not to injure the printing surface.

The steps in the preparation of a block for printing a simple initial are shown in 2.

Printing from lino-blocks. Although the process of printing from a lino-block in one colour takes some time to describe, because of the possible alternative methods, the carrying through of any one of these methods takes very little time.

The colour used for printing labels may be water-colour prepared with "Gloy" exactly as for pattern printing, or printer's ink may be used (p. 162).

The simplest way of applying water-colour to the block is with a broad brush. For all except very small blocks the 1" or 1½" flat varnish brushes used for pasting and for paste-colour work will serve this purpose. When brushing on the colour care must be

taken not to get excess of colour on the edges and in the gaps of the printing surface.

A speedy way of inking the block if a number of prints are to be made is with a roller. The kind used by photographers, with a rubber roller about $4" \times 1"$, is satisfactory. The colour is put on to a glass or slate, rolled out in a thin layer and then rolled on to the printing surface. It is convenient, especially if much work is done with printer's ink, to have a couple of framed school slates hinged together to form an inking slate (3, p. 185).

The colour having been applied, the paper to be printed is laid face down in position upon the block. A piece of waste paper is laid over it, and the whole rubbed down lightly with the fingers, taking care not to press the paper into the gaps in the block. The print is then removed, and when dry is ready to trim.

If the block is large something more than the fingers will be needed for rubbing down the paper. There are many forms of "baren", as the rubber for this purpose is called. A simple one may be made for school use as shown in 4. It consists of a tin lid about $3"$ in diameter. Below it is placed a disc of corrugated cardboard, the kind commonly used for packing; and over the whole is tied a cotton rag. This rubber must not be used with such pressure as to flatten out the corrugations of the cardboard.

If a rectangular rubber is preferred one can be made as 5, from a block of wood about $4" \times 2" \times 1"$, covered with coarse canvas such as sacking.

Alternatively, the paper may be rolled over the back with a clean dry roller, using a firm pressure. This is a quick method but is likely to produce more imperfect prints than rubbing until the pupils have had a good deal of experience with it.

Another method of making the imprint is to place the inked block on the bed of a screw standing press. The paper is laid in position, covered with a pad of a few thicknesses of waste paper and with a pressing board, and the press screwed down tightly. Though slower than the rubbing method, and of course limited by the number of presses available, this way of making imprints is very satisfactory in its results especially when printer's ink is used. Only a brief "nip" is required; the press can then immediately be unscrewed and the print removed to dry.

From all these methods the beginner will be best advised to choose the simplest, *i.e.* "inking" with a brush and rubbing the

paper with the fingers, to begin with. Once the essentials of the process have been mastered the advantages of the various alternative methods can be utilised.

In the next Stage of the course one or two simple devices will be described which will make the process of making a large number of prints a quick and easy one, but it is wise to avoid all complications, and to use only the most primitive processes, when introducing block printing for the first time.

Applications of the process. Plate XXII shows a number of simple block-printed labels which may be taken as typical of what can be attempted at this stage. They include book and programme titles, a simple pictorial name-plate or book-plate; labels with class or form numbers, to be used on exercise books, etc.; simple initial labels; and shields or symbols to be used as team or house labels, headings for fixture announcements, etc.

The main difficulty experienced in designing such blocks by pupils who are only at the beginning of lino-block work is that of avoiding over-elaboration. Lettering and decoration must be simple and easy to cut, and, as with designing lino-stamps, the cutting tool must be allowed to do much of the designing.

As a rule it will be found easier to cut blocks which print white lines, and especially white lettering, on a black ground, than those which print black lines or lettering on a white ground. Thus the "Programme" label, though it contains finer lettering than the "Poems" label, is the easier to cut of the two.

Similarly, the white "netball" shield is fairly easy to cut, but to make a block to print a black net on a white ground would be far more difficult, owing to the danger of cutting away the fine ridges with the knife.

There are certain other decorative processes which may be of occasional use in book crafts and which may be introduced at this stage.

Stencilling. One is stencilling, a process the nature of which will be familiar to most readers, and which, in a modified form, has already been introduced at an earlier stage of the Course under the name of "edge stencilling". But directly stencilling is elaborated beyond this very simple modification, it tends to become less useful for book crafts purposes, for the application of *closed* stencils to pattern printing is a process full of difficulties and pitfalls.

It may be sometimes useful for patterns composed of simple and widely-spaced units, for borders and centre-pieces, for

easy pictorial forms such as the bird in 7 (p. 185), and for large titles and monograms. Its use for lettering is limited by the fact that tiny and intricate stencils are exceedingly difficult to cut, so that only large letters can be successfully stencilled.

The "lightning" decoration on the "Radio Times" reading cover in Plate XIXb was worked with the stencil shown in 8.

The special paper sold for making stencils is a stiff waxed paper, usually supplied in sheets of Royal size. If much stencil work is done, especially with large stencils, it is desirable to use this special paper, but for small stencils stiff drawing paper will serve.

The expert stencil worker uses a special stencil knife, and cuts his stencil on a sheet of glass or zinc. For the incidental purposes of the book crafts course satisfactory stencils may be cut using the knife from the set of lino-cutting tools (p. 158), on a millboard or strawboard, providing that the surface of the cutting board is smooth and not badly scored.

The paper to be cut having been marked with the design of the stencil, it is laid on the cutting board and the design cut round with the point of the knife, moving the paper about so that the knife always moves towards the worker.

Water-colour mixed with "Gloy" as for printing will serve all the needs of stencilling in the course. Only if stencilling is developed further than is here suggested will special stencil colours be required.

A stencil brush (6, p. 185) is necessary. The $\frac{1}{2}$ " diameter brush is a useful size.

Method of stencilling. The stencil is laid in position on the paper to be decorated, and held there with the left hand. The colour, a very little of which is picked up on the brush, is dabbed over the stencil plate, finding its way through the holes on to the paper beneath. In no circumstances must the brush be dragged across a closed stencil; it must always be held upright and used with a "dabbing" motion.

The chief enemy to clean stencilling is excess of colour; once the colour gets under the stencil plate the pattern is marred.

Marbling. Another decorative process of limited use in book crafts is marbling. Essentially, it is a method by means of which colours floated upon the surface of a specially prepared jelly or "size" are transferred to a paper which is laid upon the jelly. The colours contain oil, and when splashed or dropped upon the

watery jelly they run into remarkable marble-like patterns, very similar to, and caused by the same forces as, the shapes seen when drops of oil spread over a puddle of water.

Recent experiments have shown that it is possible for marbling to be done satisfactorily with cheap materials and in a very simple way, so that it may properly be used at times by senior children as a means of decorating cover and end-papers.*

It is not, however, wise to use marbling too frequently, because the patterns produced, though often attractive, are to a large extent accidental, and the very ease of producing these curious patterns leads to the danger of their being overdone.

It is not a process that lends itself to development through gradually ascending stages of difficulty in a course of work, and it offers so little control by the pupils over the design that it cannot claim an important place among the decorative methods of school book crafts.

LETTERING

Broad-pen lettering should be continued during this stage on the lines suggested in Chapter 12, special attention being paid to letter form and spacing.

Roman alphabet. For the designing of lino-blocks containing lettering, the Roman alphabet shown in 9 should be used. Little difficulty should be experienced in deciding upon the general proportions of the letters, as these have formed the basis of the alphabets previously practised, but the subtleties of the thick and thin strokes, especially in the curved letters, will require careful study.

At first the letters may be sketched in pencil and blocked in with a brush; pupils who show special aptitude or who get much practice may draw them in outline with a narrow pen, as the "A" in 9, and later still they may be drawn directly with a brush.

Labels drawn or printed with this Roman lettering look exceedingly well on book crafts exercises, but it is not advisable to attempt either to draw or to cut them less than half-an-inch high; smaller lettering being written with the broad pen or printed with type.

Occasionally it is effective to leave the letters in outline, drawn with the narrow pen as mentioned above, but it should be

*See "Hand-decorated Papers for Book Crafts"—Dryad Press.
"Two Methods of Marbling"—Dryad Press.

A B C D
E F G H I
J K L M
N O P Q
R S T U
V W
X Y Z

remembered that these open letters are less easy to read than those which are blocked in.

The use of printer's type. One of the most useful lettering processes which may be introduced at this stage is the use of printer's type for lettering titles and labels. The type is used singly, exactly as are printing-sticks, and with careful and methodical operation will produce very presentable results, hardly distinguishable from titles printed in a press. This enables the pupils to use well-proportioned lettering of a size far smaller than they could possibly hope to write with a pen, or cut in lino, with any chance of success.

A piece of printer's type is shown in 10. When a quantity of assorted type is sold as a "fount" or set of letters, each letter appears several times over; the proportions of each being those in which the letters are likely to be needed when setting up

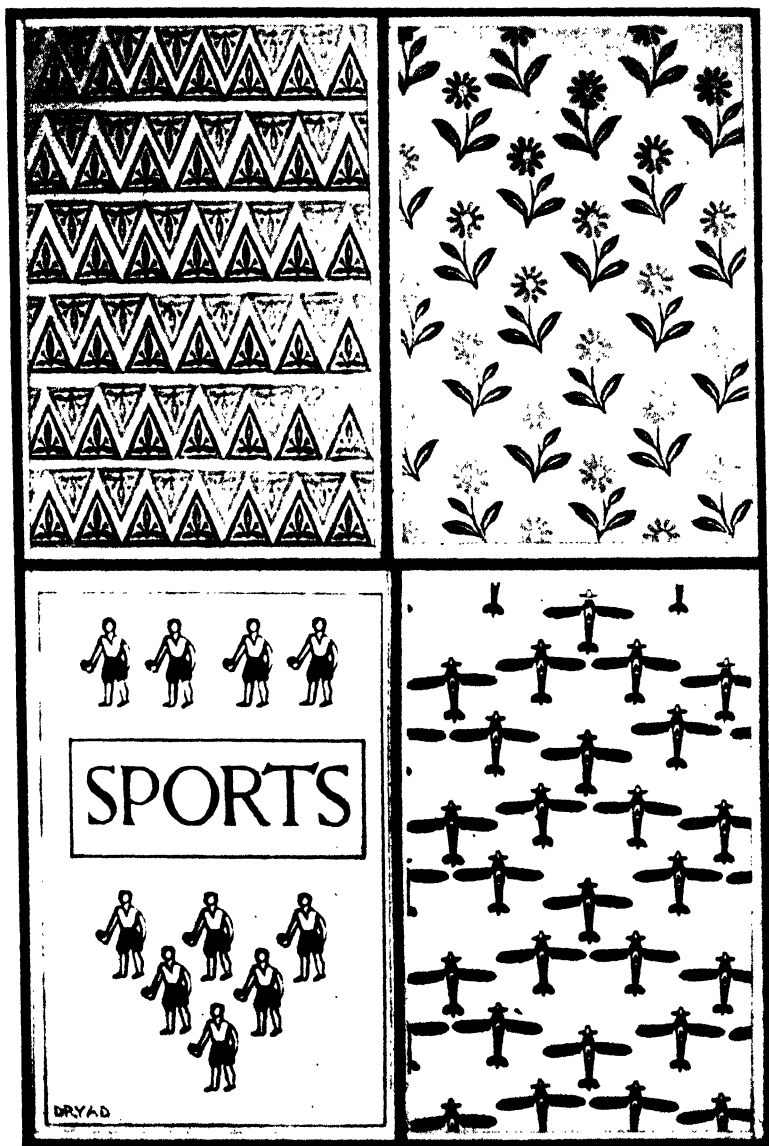


10

letterpress. For use as hand stamps as here suggested only a single alphabet of capitals, with figures, full stop, comma and hyphen, will be required. Founts of type are sold by weight; a special selection of letters such as this will cost more than the same weight of type in a fount, but even so, a suitable alphabet can be purchased for a small sum.

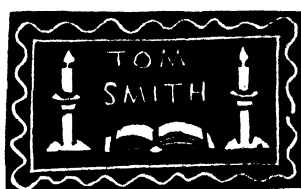
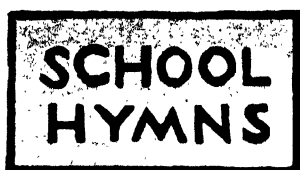
Type faces. Type is made in a multitude of different "faces" or designs. "Caslon Old Face", "Baskerville", and "Titling Forum" are all type faces of fine form and suitable design for book crafts titles.

Type sizes. The matter of type sizes is one full of technicalities, but all that the book crafts worker needs to know is that "24-point" type, which prints letters about $\frac{1}{4}$ " high; "18-point

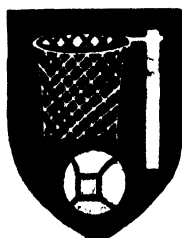
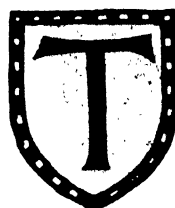


Patterns printed with Lino-stamps: c is used in conjunction with a lino-block title

PLATE XXI



◀ POEMS ▶



Labels printed with simple lino-blocks

PLATE XXII

DECORATION AND LETTERING

about $\frac{3}{16}$ " high; and "12-point", about $\frac{1}{8}$ " high, are the sizes most useful for his purpose.

"24-point" prints a large bold title. Both it and "18-point" can only be used on book backs reading from bottom to top. For titles across the backs of thick books, and for other small titles 12-point is necessary. If only one alphabet can be obtained it is wise to start with 18-point. The words "Stamp Album" in Plates XXa and b were printed with 24-point Baskerville; those on the two books in Plate XXIIIb with 18-point and 12-point Baskerville, using the type singly in each case. 11 gives an example of each size printed in "Caslon Old Face".

NOTES

12 pt.

NOTES

18 pt.

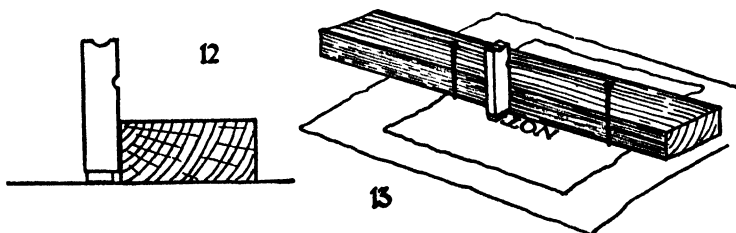
NOTES

24 pt.

11

Method of using the type: Water-colour mixed with "Gloy" exactly as for stick printing can be used for printing on paper or matt surface cloth with type. Two cautions are necessary: first, that very little colour, and that mixed stiffly, should be used, as any excess will inevitably fill up the type and blur the imprints; and second, that metal type, especially if it has been used with printer's ink, may be slightly greasy, and must be carefully cleaned with methylated spirit, otherwise the water-colour will not hold to it.

Printer's ink must be used if printing on hard surface cloth, and is preferable to water-colour for printing on paper. It is



worked with a brush on glass, exactly as described on p. 163. Again the greatest care must be taken not to blur the letters with the slightest excess of colour.

To align the letters a thick straight-edge must be used. It is advisable to have one at least $\frac{3}{8}$ " thick, as it is required to steady the type and keep it upright when printing (12). A few strips of wood with one edge accurately planed straight and "square" should be kept handy for this purpose.

Until proficiency is gained in the method it is best to keep to the printing of labels, which can be repeated if spoiled. The piece of paper or cloth for the label is laid on a pad—not too thick or soft—of waste paper, the straight-edge is put in place, and two pins inserted against it as shown in 13, which views the process as it would be seen facing the worker. The straight-edge is kept up against the pins with the left hand; if displaced it can then quickly be replaced in the correct position. The type is used as shown, being firmly pressed down and slightly rocked to ensure a complete imprint.

The spacing of the letters is a matter for the worker's judgment; a few experiments will make matters much easier than at first.

After the complete title is printed the outline of the label is set out and the label cut. If printer's ink is used on cloth it should be left to dry, preferably for some hours, before fixing the label in its final position.

CHAPTER 15

Fifth Stage: Types of Constructive Work

CHRISTMAS CARD—CALENDARS—RE-COVERED BOOK, ALREADY SEWN AND BACKED—REBOUND BOOK WITH SQUARE BACK—LARGE CLOTH-BOUND PORTFOLIO—READING CASE FOR SEVERAL THIN MAGAZINES—POCKET BOOK—GRAMOPHONE RECORD ALBUM—BOOK WITH DECORATIVE LACING—REBOUND BOOK, ROUNDED AND BACKED.

1 CHRISTMAS CARD. (Plate XXIIIa, right-hand top.)

Only one Christmas card is given for this stage, but of course any of the previous types can be chosen, to carry decoration and lettering appropriate to the pupils' abilities.

The specimen shown is of Type C (p. 81). It is decorated with an all-over pattern printed from a fairly difficult lino-stamp, a border ruled in two colours, and a label written in colour. The back is sewn with coloured thread.

2 CALENDARS. (Plate XXIIIa.)

Two of the three specimens shown are of types previously made. That at the left-hand of Plate XXIIIa is of Type G (p. 141) decorated with a seasonable border printed with lino-stamps and lettered with a broad pen.

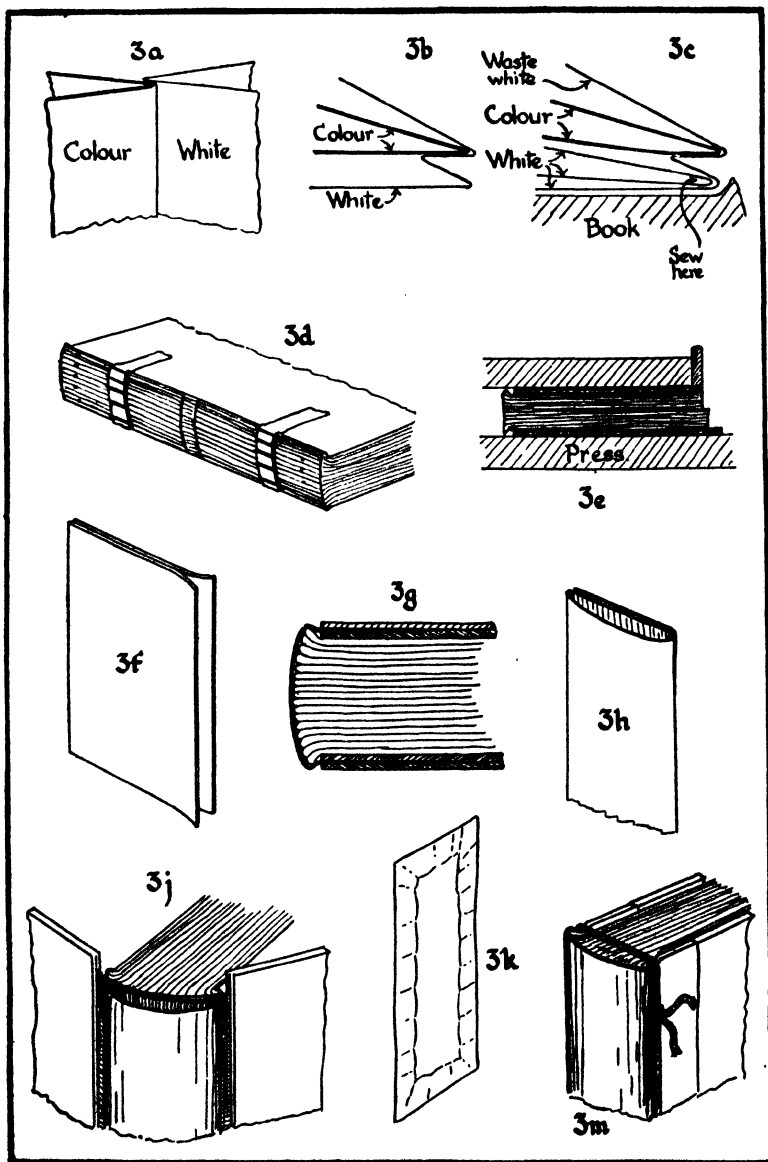
That in the centre of Plate XXIIIa is of Type J (p. 170), but it has more elaborate lettering than the one formerly made, and is decorated with a pen-drawn border in two colours.

Type K. (Plate XXIIIa, right-hand bottom.)

The construction of the stand for this type is similar to that of Type H (p. 142)—a covered board with a prop. The calendar makes a good exercise for pupils who are fairly proficient in ruling and lettering. The twelve pages for the year are fixed with eyelets as a pad, to be torn off as the months pass.

3 RE-COVERED BOOK—ALREADY SEWN AND BACKED. (Plate XXIIIb, left-hand.)

The complete rebinding of a multi-section book, properly sewn, rounded and backed, is an exercise which must be left to the bookbinding course, but at this stage the pupils may well tackle those parts of the process which involve the making of the cover and end-papers, assuming that the sewing, rounding and backing are already done.



TYPES OF CONSTRUCTIVE WORK

This most useful exercise is therefore to be applied only to books of which the sewing is sound but the covers dilapidated or of inferior quality.

If the covering is done in split boards the result will be almost as strong and serviceable as if the book were completely rebound.

The examples here given also introduce the use of leather, but the process is of course generally applicable to books bound in quarter, half, or whole cloth.

Steps:

- 1 Open the book and carefully cut through the old mull and tapes at the hinge joints. Do not cut the tapes off too close to the first section. Remove the old cover and cautiously clean the back, picking off as much of the old paper and glue as can be removed without injuring the sewing. A little warm water will help in this process. Throw back the end-papers and carefully detach them without damaging the end sections.
- 2 Prepare two zig-zag end-papers as follows: Take two coloured papers and four white papers, each twice the size of the book, and fold each across. Tip each coloured paper to a white one with paste as 3a, making the overlap at least $\frac{1}{8}$ ", and dry under pressure. When dry, fold each white sheet round the coloured one as 3b, and insert the second white one in the joint as 3c. It may if desired be lightly tipped in with paste to keep it in place during sewing, or it may be pasted to the back of the coloured leaf. Some binders omit the second white fly-leaf, but this is unwise as it leaves only one thickness of paper to be sewn through.
3c shows the end-paper placed in position on the book, with three white fly-leaves, then two coloured leaves, and last the white waste end-paper, counting outwards from the first section.
- 3 Lay the end-papers in place on the book. Cut two tapes and paste them round the back over the two outermost of the old tapes and down on to the waste end-papers. In order to make the back less lumpy strips of cloth may be used instead of tape, but they are not so strong.
- 4 Sew the first end-paper to the tapes through the two white fly-leaves (3c). Tie each end of the stitching to the

original kettle-stitch of the first section. Then sew every fourth or fifth section to the new tapes, tying at the kettle-stitch to that of the adjacent section of old sewing; finally sew the second end-paper and tie off (3d). The end-papers are then thrown back, tipped with paste, and pressed into position against the first and last sections. It is best to leave this tipping until after the sewing, which may otherwise be difficult owing to the "lip" of the book.

- 5 Put a thin coating of glue on the back and work well in. Mull the back over the tapes.
- 6 If desired, and if the book is not too thick, the head and tail can now be trimmed, packing the sides of the book with waste board to avoid crushing the projecting "lip" in the press. If the back is soft enough to be pressed out square the fore-edge may also be trimmed (3e); when the book is taken out of the press the back will resume its rounded shape and the fore-edge be concave.
- 7 Cut the waste end-papers off to the mull.
- 8 Prepare two split boards as follows: take two 10-oz. strawboards, or one strawboard and 1 6d millboard, for each split board. They should be slightly larger than the boards are finally needed. Paste one all over, except for a strip $1\frac{1}{4}$ " wide down one edge, put the other board on it, and dry under pressure. Repeat with the other two boards. When dry it is possible to pass a folder between the boards at one edge (3f). Trim the boards to size.
- 9 Paste both sides of the mulled hinges, and set the boards, putting the hinge into the split in the board (3g). Dry the book under pressure, putting waste paper or tins inside the boards to prevent the end-papers from sticking.
- 10 Prepare a hollow back from a strip of stiff paper (100-lb. manilla) three times as wide and exactly as long as the back of the book. Fold it into three lengthwise, and paste the two upper flaps together, leaving the centre unpasted and forming a flat hollow tube (3h).
- 11 Build up the back of the book if necessary with paper between the tapes to make it even, and glue the "hollow" in position. When dry, cut down through the hinges and the sides of the hollow at head and tail for the turning in of the cover (3j).

TYPES OF CONSTRUCTIVE WORK

- 12 From now on the covering, if in cloth, is exactly as previously practised. If a leather back is desired (only quarter-leather binding is advisable for the first attempt), measure the width of the back (8e, p. 150) and set out the leather to size, allowing $\frac{1}{2}$ " turn in at head and tail. It is wise to leave the leather a little too large and to trim it to final size after paring.

The inside of the leather, unless it is very thin, must be carefully pared all round to a "feather-edge" (3k), using the rounded blade of a sharp cardboard knife, and laying the leather face downwards on a cutting board. When covering with leather, paste thoroughly and allow the paste to soak in for a few minutes before fixing the leather.

To make a neat hinge-joint, a leather back while drying may be tied round with string as 3m; but this should not be done with cloth.

Decoration and lettering: As required. The example has a label on the spine and a side title printed directly on the cloth with single type.

- 4 REBOUND BOOK WITH SQUARE BACK. (Plate XXIIIb, right-hand.)

By now the pupil may wish to rebound a book of a number of sections which need to be re-sewn, or one which consists of separate parts. To round and back such a book is a matter for the later bookbinding course. A strong and presentable binding, although less attractive in appearance than the rounded and backed form, may be made with a square back.

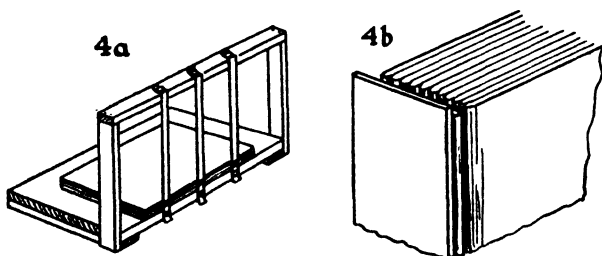
Steps:

- 1 Prepare sections, zig-zag end-papers, and stiffened tapes for sewing. For a book of many sections a simple sewing frame (4a) will be more convenient than loose tapes, but it is not essential. Mark up and sew end-papers and sections, throw back end-papers, and tip them to first and last sections. (See Exercise 8, Fourth Stage, and Exercise 3, Fifth Stage.)
- 2 Glue the back. When the glue is set but not quite hard trim head, tail and fore-edge, keeping the back square during the process.
- 3 Colour the edges if desired. (See p. 216.)

BOOK CRAFTS FOR SCHOOLS

- 4 Cut off the tapes to length, paste down on the waste end-papers, mull the back, and cut off waste end-papers up to the mull.
- 5 Prepare a hollow back as for Exercise 3 (p. 198). If the book is more than $\frac{3}{8}$ " thick it will be wise to fix a strip of flexible card (*e.g.* 6d millboard) to the back of the hollow (4b) to keep the back neat and flat.
- 6 From now on forward the book, whether in quarter, half, or full cloth, exactly as previously practised.

Decoration and lettering: These may be as desired. The example is lettered on the spine with printer's type.



5 LARGE CLOTH-BOUND PORTFOLIO. (Plate XXIVa, left-hand.)

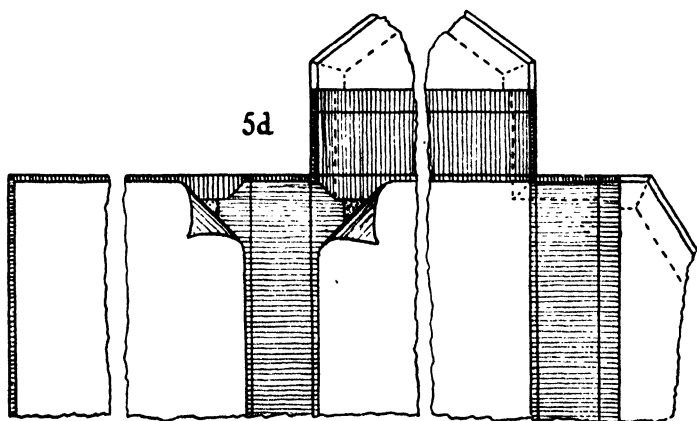
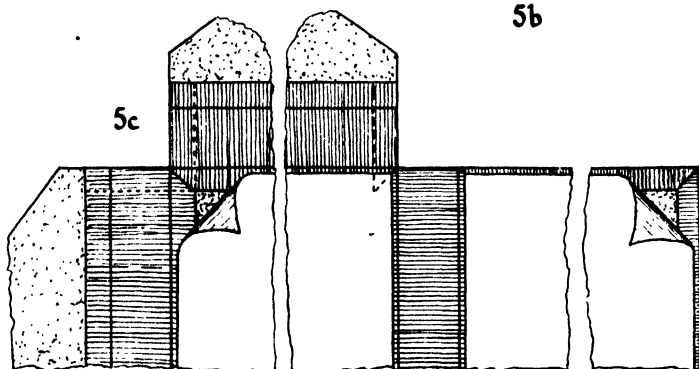
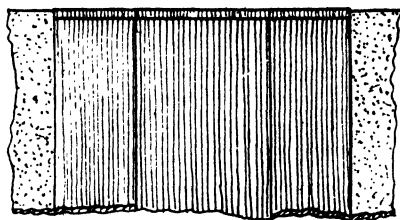
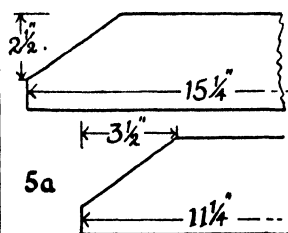
This is a substantial portfolio with board flaps, made to take Imperial 4to sheets. The front cover is bound all round with cloth, for additional strength and to conform with the back.

The materials required are: 32-oz. strawboard for the sides; 12-oz. strawboard or 6d millboard for the flaps; cloth; cover paper; lining and tapes. The quantities may be worked out from the leading dimensions given.

Steps:

- 1 Cut boards to $15\frac{1}{4}" \times 11\frac{1}{4}"$, and the two small and one large board flaps to the sizes shown in 5a.
- 2 Fix the boards to the back and line the hinge as 5b. Stiffen the back between cover and lining with a strip of paper.
- 3 The construction of the portfolio, and the hingeing of the flaps, is shown in 5c, which is the view from the outside, before the flaps are covered; and 5d, which is the view from the inside, after the flaps are covered. Note that the ends of the outer cloth of the flap hinges are turned over, strengthening the end of the hinge.

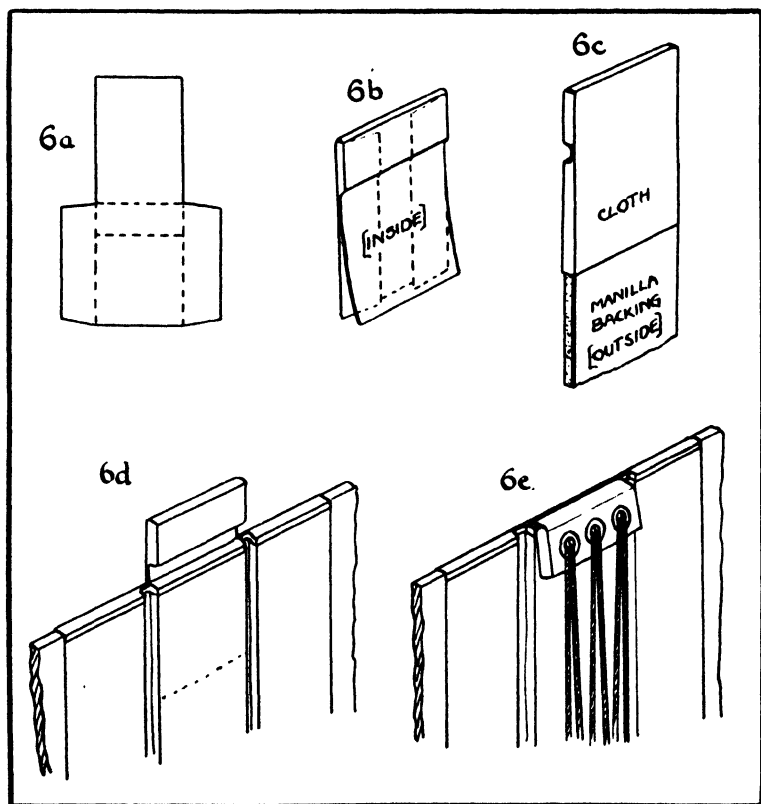
TYPES OF CONSTRUCTIVE WORK



BOOK CRAFTS FOR SCHOOLS

The tapes must be put in after the cover papers are put on but before the boards are lined.

Decoration and lettering: This article is too large for a closely printed pattern, but a paste-coloured combed paper may be used to effect as shown in the specimen. The label is printed with single type.



6 READING CASE FOR SEVERAL THIN MAGAZINES. (Plate XXIVa, right-hand.)

This useful reading case will hold six copies of a thin magazine, *e.g.* the example shown holds 6 months' issues of the "Meccano Magazine", which can be placed in it as they are published until the case is full. It is strong, neat, no part of the binding device is seen outside the case, and it looks well whether it contains only one or six magazines.

TYPES OF CONSTRUCTIVE WORK

The materials required are strawboard or millboard for the boards and back; cloth, cover and lining papers; six eyelets, and a length of strong cotton lacing rather more than six times the length of the back. The dimensions depend of course on the magazines to be held, but in any size the back should be not less than $1\frac{1}{4}$ " wide, and the case not less than 1" longer than the magazine.

Steps:

- 1 Cut the boards to size, mount the cloth corners, and fix the cloth back *without* inserting the board strip. Do not line the back.
- 2 Cut two small pieces of 7d or 8d *millboard* to size, and two pieces of cloth to shape, shown in 6a.
- 3 Paste the cloth and fold it over the millboards as 6b, but do not rub down the long flaps until the next step.
- 4 Immediately open the long flaps, and fix them to the head and tail of the back strip of board as 6c. Line the outer side of the back strip between the cloth flaps, using a piece of paper the same thickness as the cloth. This ensures a smooth back for the case (6c).
- 5 Paste the inside of the cloth back of the case, set the back strip in position, and fix the lining as 6d.
- 6 Cover and line the boards.
- 7 Fix three eyelets in each small millboard, and lace up and down six times as shown in 6c. One magazine is to be passed under each section of the lacing.

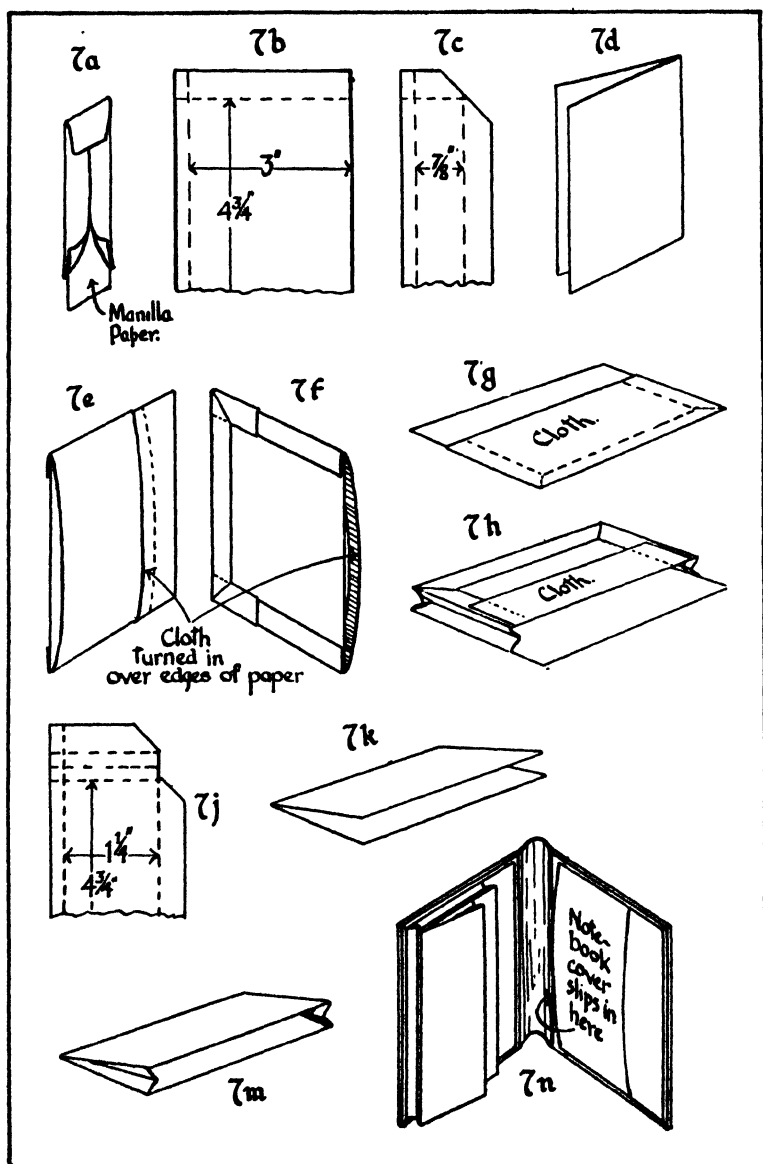
Decoration and lettering: As in other magazine reading covers, this case offers special scope for "topical" patterns for cover decoration. The label on the spine of the specimen is printed with single type.

7 POCKET BOOK. (Plate XXIVb, left-hand.)

This pocket-book is much more difficult than that made in the Junior Course. The back is of leather; it contains square-pleated and single-pleated pockets and a stamp pocket, all made in cloth, and the cover is fastened with a press stud. It forms a most attractive and durable article which is very economical to make.

The materials required are 16-oz. strawboard or 7d millboard; leather (skiver) for the back and strap; cloth for the sides and of a different colour for the pockets; 120-lb.

BOOK CRAFTS FOR SCHOOLS



TYPES OF CONSTRUCTIVE WORK

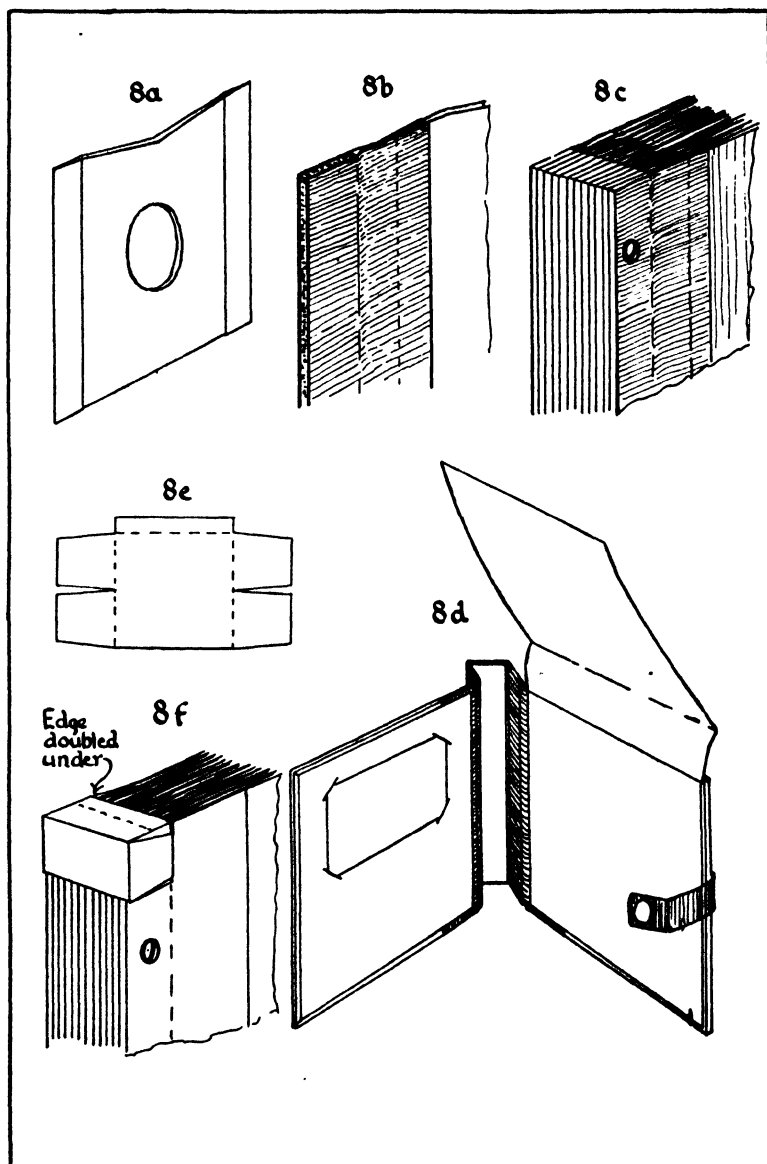
manilla paper for the pocket stiffening and for the cover of the notebook; white paper for the leaves of the notebook, and one small press stud.

The notebook is made from trimmed Large Post 4to exercise paper, folded 4to and trimmed after sewing to $4\frac{3}{4}" \times 3\frac{1}{4}"$. The other sizes are all based on this and can be estimated from the diagrams.

Steps:

- 1 Cut the boards, make and line back with leather. Cover the sides with cloth but do not line them.
- 2 Make a strap for the press stud, of leather folded over a strip of manilla paper as 7a. Fix the top of the press stud; cut a slot in the right-hand cover board, pass the strap through, work the slot tight and flat round the strap on the inside, and paste the strap down. Fix the other part of the press stud in position on the left-hand cover board.
- 3 Cut out the cloth for the book pocket and stamp pocket as 7b and 7c, and build the pockets up over a folded manilla paper (7d) as shown in 7e, which is a front view, and 7f, which is a back view. In the diagrams the pockets are shown fairly wide open; actually they should be made as flat as possible. The front of the stamp pocket should be stiffened with a strip of manilla paper.
- 4 Build up the square-pleated pocket with a manilla lining and top as 7g and 7h. Both papers are lined part of the way across with cloth as shown.
- 5 Cut out the cloth for the single-pleated pocket as 7j, and build it up on a folded manilla paper (7k) as shown in 7m, lining the lower part of the pocket with cloth.
- 6 Mount this pocket on the large pocket, and fix all pockets in place in the covers as lining, as shown in 7n.
- 7 Make a small notebook of 24 leaves, sewn from 6 sheets of $10" \times 8"$ paper folded 4to, with a manilla cover, faced with cloth if desired, and trimmed to $4\frac{3}{4}" \times 3\frac{1}{4}"$. Slip the back cover of the book into the book pocket.

Decoration and lettering: This book will not need decoration; it may if desired be lettered with name or initials printed with single type, or with a tiny lino-block printed monogram label.



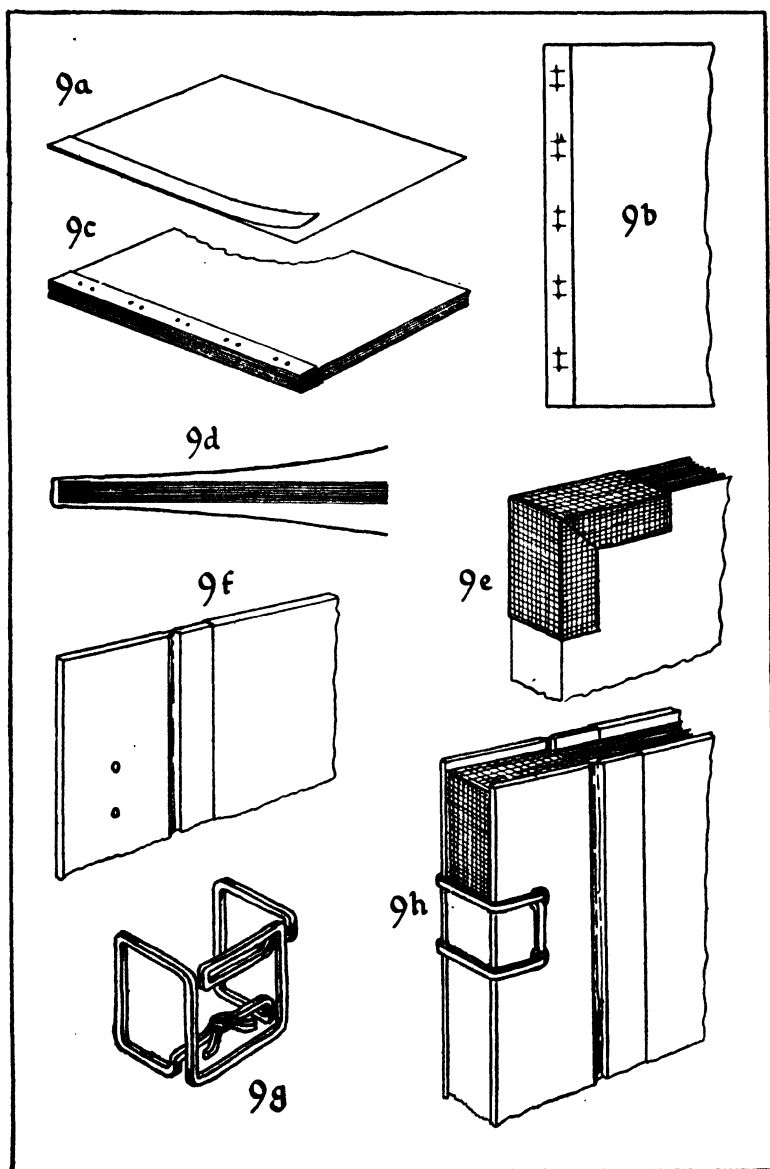
8 GRAMOPHONE RECORD ALBUM. (Plate XXIVb, right-hand, shown closed; Frontispiece, shown open.)

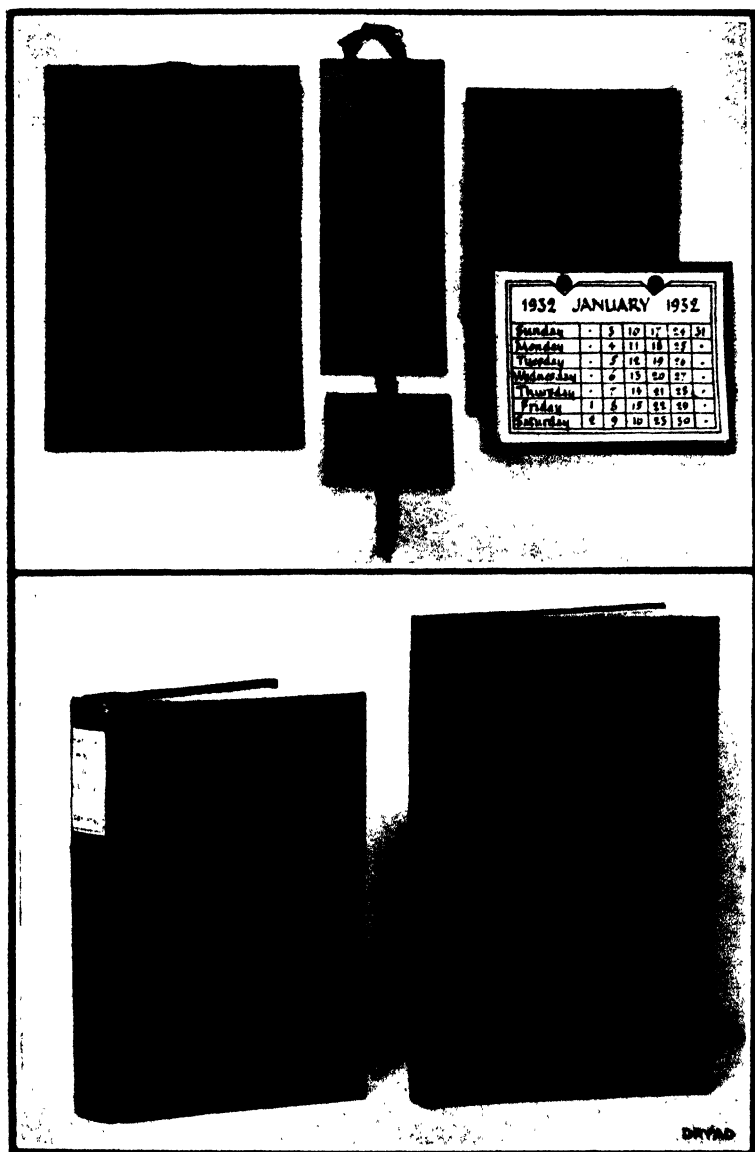
This type of construction makes a very strong and neat record album. Although screw binders are used they are for strength only, as it is not intended that the album should be taken apart after it is once assembled. A novel and useful feature is the manilla flap which folds over the top of the records when the album is closed, keeping out dust and preventing the records from accidentally slipping out.

The leading dimensions are based on the size of the envelopes, which in this specimen are $10\frac{1}{4}" \times 10\frac{1}{4}"$, but this size should be checked against the records it is desired to store, as different makes of records vary slightly in diameter.

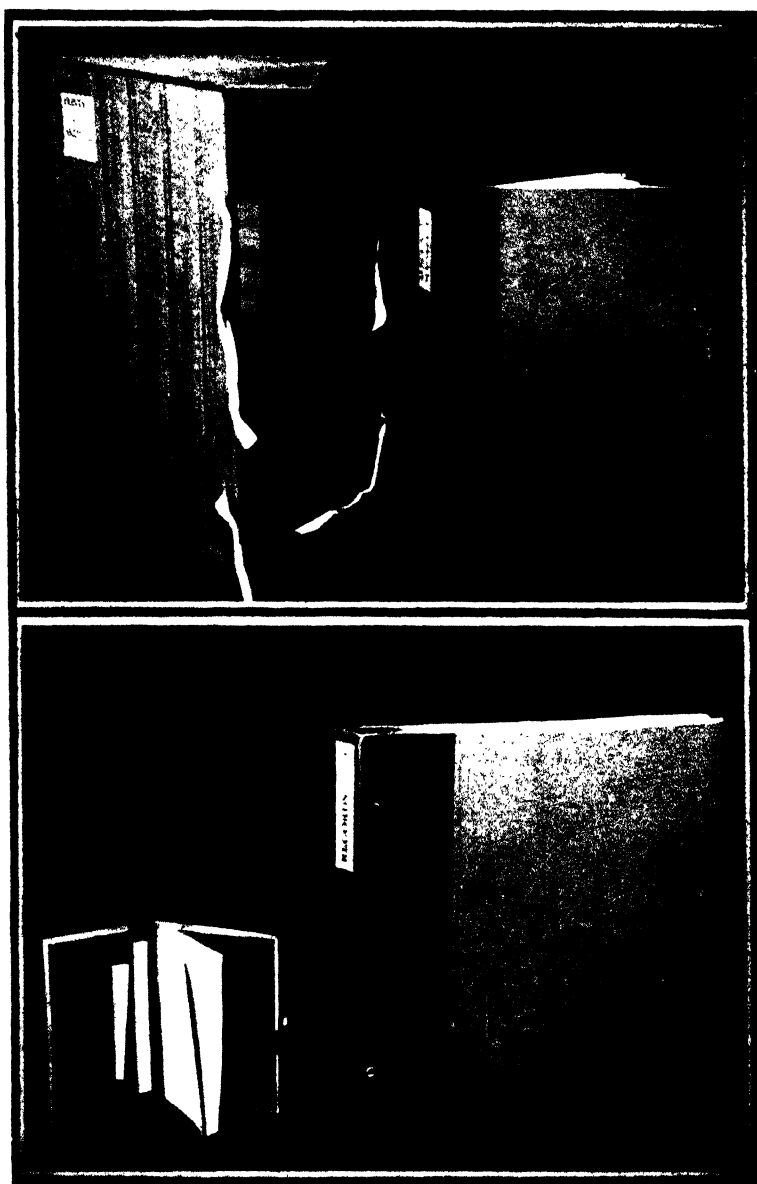
Steps:

- 1 Make 12 envelopes from 120-lb. manilla paper as 8a. Use a template for setting out the tops. The holes, which are $3\frac{1}{2}"$ diameter, may be cut either by drawing the knife round a disc or tin-lid, or, better still, by using as template a square board of three-ply wood in which a hole has been cut with a fretsaw. The point of a lino-cutting knife is best for making the holes.
- 2 At one end of each envelope mount two strips of cloth $2\frac{1}{2}"$ wide, and between these at the rear edge fix strips of 32-oz. strawboard $10\frac{1}{4}" \times \frac{7}{8}"$, as stubs (8b).
- 3 Make a punching gauge, and punch each of the stubs to take two screw binders. Paste the outside of the stubs, place together, and screw up temporarily with the binders (8c).
- 4 Make a square backed hinged cover to fit the "book" thus made, using strong cloth for the back and thinner cloth for covering the boards. Fix a double cloth strap and press stud in position for fastening. Before lining the back board fix the manilla flap in position; and slit the lining of the front board to take an index card (8d). The lining is not pasted for about half-an-inch round the slits.
- 5 Carefully ascertain the positions for the holes in the cover by putting the cover round the book and gently tapping it down on to the heads of the screw binders. This will mark the inside of the cover where the holes are to be punched. Punch the holes with a saddler's punch.





Constructive Work: Fifth stage



Constructive Work: Fifth stage

PLATE XXIV

- 6 Cut head and tail caps from strong cloth as 8e, and mount as 8f.
- 7 Remove the screw binders, place the cover on the album, and carefully screw up the binders again.

Lettering and decoration: Little decoration is likely to be considered necessary. The specimen shown has a cloth label on the spine, printed with single type.

9 BOOK WITH DECORATIVE LACING. (Frontispiece, bottom left-hand.)

This book may well be made as a communal exercise by a group of pupils, for use as a school or form "honours" book in which names, original verse, etc., of special merit can be inscribed in fine lettering as a permanent record of distinction. It can be made into a very beautiful school or personal possession. For home use it may also serve as an album or visitors' book. The binding is permanent, the lacing forming a decorative feature, the design being to some extent based on oriental binding methods.

The example shown has 16 leaves of hand-made drawing paper, and is $12\frac{1}{2} \times 9$ ". The paper is cut with the "deckle" edges, *i.e.* the original rough edges of the paper, showing at the tail and fore-edge.

Steps:

- 1 Cut the pages to size, and paste a paper stub on each (9a), make a gauge for piercing (*not* punching) and pierce each stub as 9b.
- 2 Paste the stubs, and build up the pages in a block (9c), using the bodkin to align the holes. Dry under pressure.
- 3 Cut an inside cover of fine pastel or other tinted paper, fold and place round the book (9d). Pierce this cover in the correct positions, and if necessary ease the holes in the stubs, which may have become blocked up during pasting, using bodkin or bradawl for the purpose.
- 4 Fix cloth caps at head and tail of back as 9e.
- 5 Make two hinged boards as 9f. Cover and line these, and pierce for lacing.
- 6 Lace with leather thongs, similar to those commonly used for leather-work, as 9g. The finished appearance of the back is shown in 9h.

Decoration and lettering: This book offers scope for the application of the best decoration, and, if desired, lettering, of which the pupils are capable. The specimen shown has a pattern printed with a large lino-stamp.

10 REBOUND BOOK, ROUNDED AND BACKED. (Frontispiece, bottom, right-hand.)

This book is sewn on tapes, is rounded and backed, and is bound in split boards, covered with cloth back and corners and paper sides.

It is shown here solely as an example of the type of book-binding exercise for which the pupils will have been well prepared by the book crafts course. The processes of rounding and of backing a book (*i.e.* of shaping the backs of the sewn sections so that they project over the thickness of the boards and form neat hinge joints), in common with other operations in bookbinding, require special apparatus and special skill.

Up to this point the pupil has been able to manage without a laying press and the other heavy and comparatively costly paraphernalia peculiar to the bookbinder. If he has worked successfully through this course he will find few real difficulties, and much interest, in mastering their intricacies and in exploring the new field now open to him in the craft of bookbinding.

CHAPTER 16

Fifth Stage: Decoration and Lettering

Lino-stamping with large units—Multiple-unit stamps: their advantages, limitations and preparation—Clearing margins and panels on printed patterns—Advances in lino-block printing—The tympan—"Type-high" blocks—Temporarily mounted lino-blocks—Fixing the block in the tympan—Printing with the tympan—Edge colouring—LETTERING—Pen and brush lettering—Type set and printed with the tympan—Frame for setting up titles in type—Setting up type in the frame—Printing with the frame—Setting up type with blocks—Limitations of type-setting devices.

By the time he reaches this Stage the pupil will have been introduced to all the essential processes of book crafts decoration and lettering which he is ever likely to need, but each one of them, from stick-printing onwards, may still be appropriate at times and will afford scope for refinements of technique and originality of design.

This Stage is therefore largely one of consolidating and improving upon the skill and knowledge already gained. There are, however, one or two definite additions to technical methods which may now be made.

Lino-stamping with large units. In lino-stamping more difficult units can be cut and arranged; an example is seen in the mistle-toe pattern on the Christmas card in Plate XXIIIa. The pupil may occasionally make use of units larger than those which can conveniently be mounted and cut on corks. Such stamps should be mounted on a fairly thick block of wood which will not "warp", *i.e.* curl, in use. The best way to proceed is to glue a piece of linoleum to a block of wood, drying it under pressure, and then to cut the unit in the same way as for a cork-mounted stamp, except that the block is placed directly on the holding board while cutting. If desired, a convenient handle may be made for the stamp from a small cotton-reel screwed to the block (1, p. 214).

All the patterns in Plate XXV, and those on the exercises in Plates XIXb and the Frontispiece, have been printed from stamps made in this way. Patterns made with such large units are generally suitable only for large articles.

When printing a large area of close "all-over" pattern, or a number of pieces with the same pattern, it may sometimes be desirable to have a number of units on the one stamp, forming a "multiple stamp" which saves time in printing. It should be borne in mind that the process has two disadvantages which limit its applicability: First, it is much harder than with a

single unit to be sure that every part of a multiple stamp is well printed—if one unit prints off badly it is almost impossible to place the whole stamp accurately enough to print over it again; and, second, once the arrangement of units is decided upon and cut on a multiple stamp no other arrangement of the unit can be tried without a new stamp.

With these limitations, however, the method is sometimes useful.

The multiple stamp may be prepared as follows: A single unit of pattern is cut and experimented with on paper until a suitable arrangement is decided upon. Lines are drawn round a section of this pattern to form the shape of the multiple unit desired. This shape should contain the required number of units, and may be approximately rectangular, but for accurate placing in a large pattern it should be made with units projecting on two sides, the corresponding opposite sides being indented, as 2. Thus each impression of the multiple stamp leaves a "key" on two of its sides by which the adjacent impressions can be accurately placed (3).

Of course this makes a pattern with irregular edges, which have afterwards to be trimmed off, unless the stamp is used projecting over the edge of the paper. If such a stamp is required to work up to a straight line on the paper the margin must be cleared as described below.

The size and shape of the multiple stamp having been decided, a piece of linoleum is mounted on a wood block as for any other large stamp. Since the stamp will have small projecting pieces, the wood backing must be strong, preferably of thick plywood, which can be cut to shape with a fretsaw.

The linoleum is then painted over with Chinese white, and when it is dry the pattern is printed upon it in a darker colour with the original single-unit stamp. The whole of the pattern, containing a number of units, is then cut on the multiple stamp, after which the Chinese white is cleaned off, and the handle mounted, when the stamp is ready for use.

It is sometimes desired to leave a clear straight margin of the ground-work paper showing round a pattern, or to leave a rectangular space clear on which to write a title in the middle of a pattern. With a rectangular stamp such as those on the Programme in Plate XVIII and the laced book in the Frontispiece, this can be done merely by careful spacing, but if the unit is very large, or is not rectangular in shape, as in the Christmas card

in Plate XXIIIa, it is necessary to print part only of the units at the edges of the cleared space.

A margin is cleared by protecting it with straight-edged pieces of *thin* waste paper, on which part of the imprints is received (4a). This waste paper must be pinned in place during printing, if possible the pins being put where the pinholes can later be trimmed off. Two edges should be so guarded at a time, as shown.

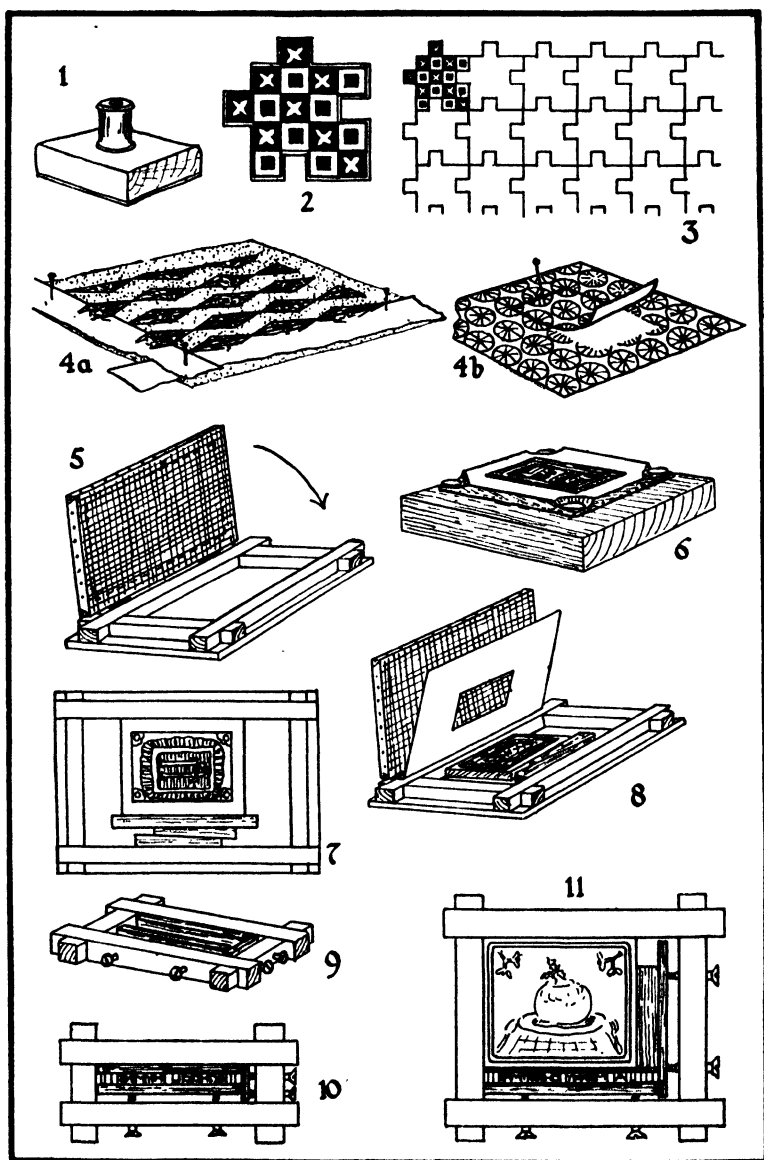
The guard for a label or space in the middle of a pattern must be cut accurately to size and lightly pinned, with fine pins which will not make holes big enough to mar the finished work (4b).

Advances in lino-block printing. Work with lino-blocks can at this stage steadily progress towards more difficult cutting and printing applied to titles, monograms, book-plates, and simple pictures for use on Christmas cards and calendars, or used as part of title labels. Plate XXVI shows a number of these applications, some of which are combined with type printing. This kind of work has possibilities of development far beyond the limits of the examples given, the standard which it reaches depending upon the attention given to its study in the school art course. For further information about this fascinating activity the reader is referred to one of the many books which deal exclusively with it.

Even if he does not go thus far into lino-block printing the book crafts worker may make use of one device in particular which makes for more rapidity and certainty of printing than the simple expedients described in Chapter 14.

The tympan. It is known as the "Tympan", and is shown in 5. It consists of two well-jointed frames of wood, hinged together. The lower frame has a bottom fixed to it, forming a shallow box, the inside depth of which should be exactly "type-high", i.e. the height of printer's type, which is equal to the diameter of a shilling. The upper frame, which may be of lighter construction than the lower, has stretched over it a piece of strong calico, linen, or bookbinder's cloth, which will stretch tightly if slightly damped before fixing. A useful size of tympan for book crafts work is 7" x 5" inside. The making of such an apparatus is a task well within the powers of senior boys in a school handicraft workshop.

"Type-high" blocks. For use in the tympan the lino-blocks must be mounted exactly "type-high", and for blocks that are to have a good deal of use it is wise to mount them permanently with



"Seccotine" or glue upon a wood backing of the required thickness. Care must be taken to choose wood that is not likely to warp, and these permanently mounted blocks, especially if they are to be used in conjunction with type, should be cut exactly rectangular and have the edges accurately planed at right angles to the bottom and the printing surface. A block that is slightly too thin can be made up to type-height by pasting paper on its under side.

Temporarily mounted lino-blocks. For blocks that are needed for only a few prints it may not be worth while to provide a permanent mounting, but they can be satisfactorily mounted for brief use as shown in 6. The corners of the linoleum are cut away so that it can be fixed down on to a block of soft wood with drawing pins which will not project above the printing surface.

One or two blocks of various sizes, or a large block to suit the tympan, can be prepared and kept handy for use as required. If these blocks for temporary mounting are slightly thinner than is required for the thinnest linoleum in use, the linoleum can be brought up to type-height by inserting pieces of paper beneath it; while the block will not be too thick for thicker specimens of linoleum.

Blocks are fixed in the tympan, ready for printing, with small wedges, or "quoins" as the printer calls them, as shown in 7. It is not usually necessary to wedge a single block from both the side and end of the tympan. Small blocks are brought near to the middle of the tympan and before wedging are packed round with pieces of wood, which the printer calls "furniture". A stock of various sizes should be kept handy. These blocks must be less than type-high, and it has been found that toy wooden bricks answer the purpose excellently, as they are generally accurately planed.

Printing with the tympan. Printing with the tympan is quick and easy. The block is coloured or inked, either with a brush or roller, or, if printer's ink is used, with a "ball", which is a pad of rag or cotton-waste round which a piece of thin leather, smooth side out, is tightly tied. The paper to be printed is then put in place, the upper frame closed down and the oblong rubber (5, p. 185) or a dry roller used on the upper surface of the linen.

If it is required to prevent the margins of the print from being soiled with superfluous ink, a guard of thin but stiff paper, with a hole cut in it the size of the print, may be hinged with adhesive tape or drawing pins to the tympan, as shown in 8.

The best way to get the hole in the right place is to fix this paper temporarily before cutting, to ink the block, and to make a print on the underside of the paper. If the paper is then removed the hole can be cut as desired, and the paper replaced in exactly the same spot. If this device is made more permanent by stretching the paper over a light thin frame, it is known as a "frisket". In use, the block is inked, the frisket lowered, the paper to be printed put in place, and finally the upper frame lowered and the print rubbed or rolled off.

The temporary frisket can have marks put on it, or thin strips of paper, on the upper side to assist in placing each sheet of printing paper correctly.

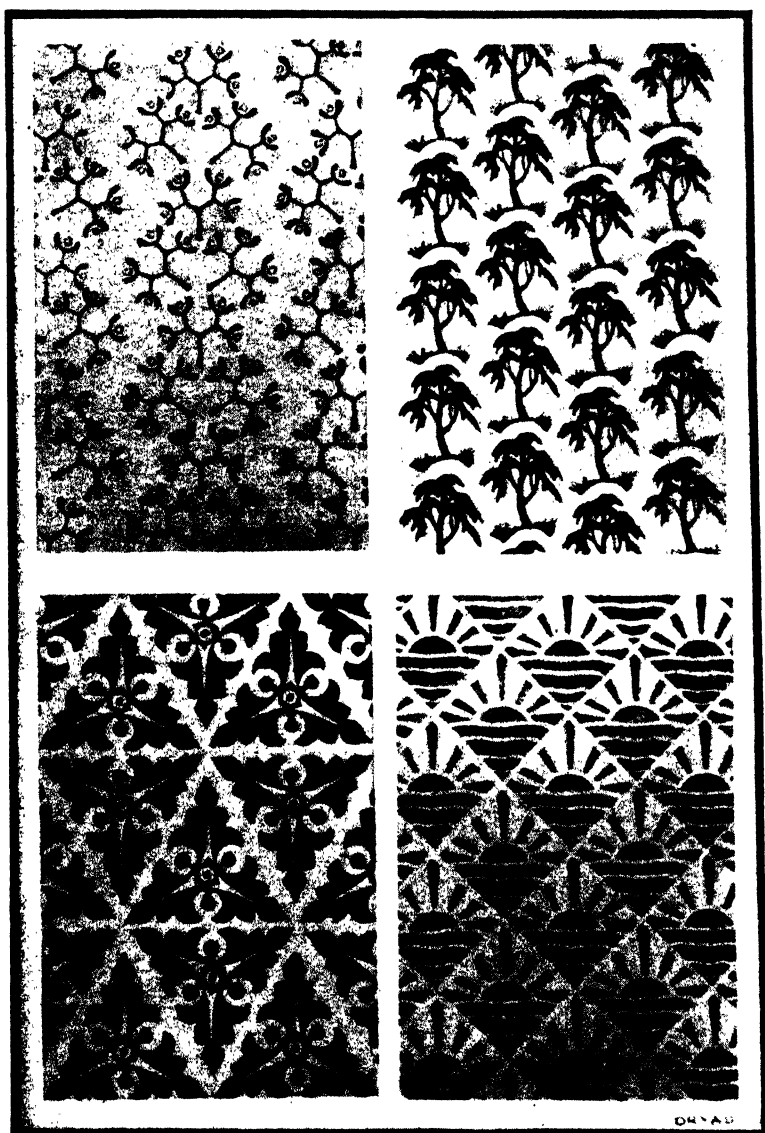
Edge colouring. The trimmed edges of book pages are often improved by colouring them. To do this is a very simple matter. The essential for success is that the leaves of the book must be clamped together, *e.g.* in a standing press or trimming press, between waste strawboards, the covers being turned back. The colour, which is water-colour mixed with a little paste, is applied with a soft brush or sponge. The book should not be taken from the press until the colour is dry.

LETTERING

Pen and brush lettering. Pen and brush lettering, like block printing, can during this Stage proceed as far as the art training of the pupils and the time available permit. Broad pen lettering will be useful for Christmas cards, calendars, titles, etc.; and pen-drawn and brush-drawn Roman letters for similar uses and for designs for lino-block cutting.

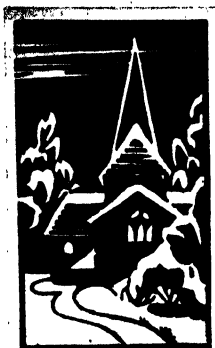
Type set and printed with the tympan. The use of type for titling may usefully be extended if two or three alphabets, or a small fount of type, together with a few type-spaces, are available. Simple experiments in the use of type set up and printed in the tympan or in a standing press can then be attempted.

Frame for setting up titles in type. For this purpose a frame in which to set up and clamp the type is required. It is the counter-part of the strong frame which the printer calls a "chase", but for these very simple beginnings of type-setting a small wooden frame (9) will be found efficient. A frame about 4" long by 1" wide inside will serve most purposes. The advantage of making it with the ends projecting is two-fold: it can then easily be constructed with strong, unyielding joints, and the projecting ends enable it to be lightly wedged in the tympan without the

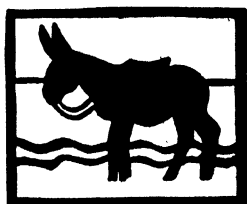


Lino-stamped patterns printed with large or difficult stamps

PLATE XXV



CHRISTMAS
GREETINGS



DRYAG

Labels printed with lino-blocks, some including printing from type

PLATE XXVI

DECORATION AND LETTERING

heads of the clamping screws getting in the way of the wedges. It is essential that the inner faces of the sides of the frame are exactly at right angles to its lower surface, so that the type will stand upright. Each of the screws is an ordinary wood screw with the point filed off, and the screws bear on small strips of hardwood as shown. The thickness of the frame should be about $\frac{1}{8}$ to $\frac{3}{8}$ inch, *i.e.* less than type-high. The frame has no bottom, for that would raise the type too high when set in the tympan, so that it has to be placed on a flat surface when setting up the type, and not removed to the tympan until the type is tightly clamped in place. If desired, a temporary bottom may be used for convenience in setting; it should be fixed with a couple of screws and removed before the frame is put in the tympan.

The type is set up in the frame as shown in 10, standing against one side of the frame, or removed from it by a slip of wood or cardboard. The line of type is built up at each end with spaces, which must of course be of the same size as the type body, *i.e.* 12-point type needs 12-point spaces. Enough spaces should be added to make up just the length, or a trifle over the length, of the long clamping block against which the screws press. If then the end and side screws are carefully and gradually tightened the type should be gripped firmly. A strip of paper or thin card cut to size can be added as an extra "space" if a very slight increase in the length of the line is needed to clamp it tightly.

If two lines of type are needed a strip of card should be placed between them to space them out, or a printer's "lead", which is a strip of type metal, may be used for the same purpose.

Printing with the frame. When a title has been set up in this way the whole frame is transferred to the tympan, lightly wedged in position, the type inked with a roller or ball, and the printing carried out exactly as from a lino-block. If rubbing is used to make the impression any slight inequalities in the setting of the type can be overcome, but if the frame is to be used on the bed of a screw press, for printing by pressure, the type must be very accurately set and the bed and upper face of the press exactly flat and parallel, otherwise some letters may "miss" and the impression be imperfect.

Setting up type with blocks. If a larger frame is used type can be similarly set up beside a block, to print title and picture in one operation. This is shown in 11. For this purpose the block must be cut accurately rectangular, and its sides, especially that against which the type has to stand, must be at right angles to

the printing surface. The titles in Plate XXVI are examples of this combined use of blocks and type.

Limitations of type-setting devices. It must of course be understood that the foregoing suggestions for using printer's type are exceedingly primitive, and can do no more than give the very slightest indication of the beginnings of the intricacies of the craft of printing. Any attempt to extend them beyond the scope of the work proposed here, *i.e.* the printing of short one-line or two-line titles, is bound to lead the worker into difficulties which can only be overcome by a real study of printing and the acquisition of proper apparatus for the craft. Such a study may well be the outcome of these simple beginnings.

Nevertheless, these expedients with exceedingly simple apparatus, well within the powers of pupils to construct, can, in careful and methodical hands, yield excellent results in the production of titles and labels in a form which would be impossible by any other means in a school book crafts course.

Appendix I

BIBLIOGRAPHY

Of the many books on various sections of Book Crafts, the following may be useful to teachers. No one book covers the whole range of the subject.

Books marked "American" in this list may be obtained through the English publishers named.

1 *Books containing information mainly on constructive work in Book Crafts for Schools.* Some of these also deal with decorative processes.

BUXTON, G. F., and CURRAN, F. L. *Paper and Cardboard Construction.* (American.) Batsford. 6/-

DAVENPORT, F. *Binding Crafts for the Junior School.* Pitman. 4/-

DAVENPORT, F. *Binding Crafts for the Senior School.* Pitman. 4/-

GOODYEAR, F. *Printing and Book Crafts for Schools.* Harrap. (Also contains sections on letterpress, linoleum- and stick-printing.) 10/6

HALLIDAY, J. *Bookbinding as a Handwork Subject.* Pitman. 3/-

KAY, J. *Bookbinding for Beginners.* Cassell. 1/3

McMURRY, O. L. and C. A., and EGGERS, G. W. *Teaching of Industrial Arts.* (American.) Macmillan. 10/- (Contains also sections on the theory of school crafts, the development of design, and woodwork.)

MATTHEWS, W. F. *Simple Bookbinding for Junior Schools.* Pitman. 2/-

SEARLE, W. J. *Bookbinding for Senior Schools.* Pitman. 4/-

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- EDUCATIONAL EXPERT. *Manuscript Writing & Lettering*. Pitman. 6/-
FAIRBANK, A. J. *A Handwriting Manual*. Dryad. 3/6
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5 Books on Letterpress Printing.

- GILLHAM, H. E. V. *Printing, A Craft for Schools*. Pitman. 7/6
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Guide to the King's Library. British Museum. 6d

Notes on Printing and Bookbinding. Victoria & Albert Museum.

1/6

Picture Books of Bookbinding, Nos. 1 and 2. Victoria & Albert Museum. 6d. each.

See also postcards and photographs of bookbinding, printing and book production issued by the Victoria & Albert Museum and the British Museum. Illustrations of fine modern book production often appear in "The Studio", published monthly.

Appendix 2

EDUCATIONAL HANDWORK ASSOCIATION: EXAMINATIONS BOARD GENERAL ELEMENTARY BOOK CRAFTS SYLLABUS OF WORK

This Course is intended as a preliminary to later specialisation in one of the branches of Book Crafts, *viz.* Bookbinding, Letterpress Printing, or Book Illustration. Whatever be the course ultimately followed, it is regarded as essential that no teacher of any branch of the Book Crafts should fail to make a study of the elements of all the activities which make up the group of crafts which is known by that name.

Teachers who may not have the opportunity to do advanced work in any branch will find in this Course a useful group of related activities appropriate to the needs of children of school age.

Although the Course includes several different types of work, they should all be regarded as constructive or decorative processes directed to the one end—the making and decoration of written or printed records, *i.e.* the Book Crafts as a whole.

While sound workmanship and a thorough grasp of even the simplest technique are essential to success in this as in all crafts, students will hardly need to be reminded of the equal importance of the development of sound standards of taste in matters of selection and design. They are strongly urged either to precede or to follow this course by the general course of Art for Schools.

CERTIFICATES OF COMPETENCY IN ELEMENTARY BOOK CRAFTS will be granted for success in both (a) an approved course of preparation, and (b) an examination as outlined below. To be qualified to sit for the examination each candidate must be certified as having completed an approved course covering the Syllabus.

To satisfy the Examiner it will be necessary to gain credit in each of the following sections: (a) COURSE WORK, (b) THEORY, and (c) PRACTICAL TEST.

THE THEORY PAPER (*Three Hours*) will consist of questions designed to test the candidate's knowledge of (a) The technique

SYLLABUS OF WORK

of the craft. (b) The equipment and materials used, their correct specifications for ordering, their maintenance and storage. (c) The framing of simple schemes of work in Elementary Book Crafts. (d) The management of large and small groups of pupils engaged in practising the craft.

THE PRACTICAL TEST (*Four Hours*) will be designed to test the candidate's ability to execute various essential processes included in the course, and may contain opportunities for the expression of individual taste in design and decoration.

COURSE OF WORK. Although, for convenience in setting out the syllabus, constructive work, lettering and the various decorative processes are mentioned separately it should be clearly understood that from the earliest stages each of these processes should be considered in its due relationship to the finished article. Thus proficiency in lettering and decorative processes should proceed side by side with the mastery of constructive work. Whenever they may be appropriate, lettering and decoration should be included in the finished product at every stage of the Course.

CONSTRUCTIVE WORK.

Note. The use of strong manilla papers of subdued tints is suggested for constructive work where no cardboard is used, as in envelopes, folders, etc. For cover papers to be used over cardboard the free use of pastel papers, decorated with restraint and due exercise of taste by the pupil, is to be preferred to the too free use of ready printed patterned papers. While some knowledge of these is expected, their extensive use in schools is handicapped by the cost of most of the more tasteful patterns. Suitable papers may also be obtained from wall-paper pattern books, but here again the greatest restraint and discrimination in selection should be exercised. The use of papers in which leather, canvas, etc., are deliberately imitated should be avoided. Not only are they usually less attractive to young children, but they offer little scope for the highly educational activities of design and decoration; moreover the use of counterfeits should be discouraged in all sound craftwork.

(The following activities are not necessarily shown in the order in which they would be introduced in a scheme of work.)

1. The making of envelopes, folders, pockets, etc., from manilla paper, without using cardboard or cloth. The principle of obtaining the size and development of the finished article by

direct folding of the sheet of stock size, rather than by the geometrical setting out of arbitrarily chosen sizes, should be duly observed.

2. The mounting of small pictures, calendars, and labels, with due regard both to the technique of clean mounting and to the position of the article upon the mount. Double and triple mounting to show borders.

3. Edge binding, with cloth, of ready-cut cards, and later of cards cut to size by the student, for loose-leaf covers, calendar backs, blotters, etc. Surface covering with plain and decorated papers.

4. The further manipulation of cloth in hingeing, cloth covered corners, blotter corners, portfolio flaps, etc.

5. The various methods of "binding" loose-leaf books, *e.g.* cords, rings, screw binders. Types of loose-leaf fittings practicable for school use. The use of the perforating and eyelet punch; the closing of eyelets. The making of various types of loose-leaf books, including albums with "stubs" and other special arrangements for holding mounted pictures, cuttings, stamps, etc.

6. Simple methods of folding sheets to form pages. The meaning of folio, 4to, 8vo, 16mo. Common commercial sizes of paper sheets.

7. The making of single-section "books", from the Christmas card or programme folded folio with stiff paper cover tied with ribbon or cord, to the 16mo notebook or album with board cover, half-bound with cloth back and paper covered sides.

8. The making of quarter-bound and half-bound "cases", to be used as loose-leaf binders.

9. The re-covering by "casing" of a book of which the sewing is intact.

DECORATIVE PROCESSES.

1. Stick printing of borders, corners, centre-pieces and all-over patterns, in one, two, or more colours, using one or more units. (a) Using plain sticks of simple geometrical outline, squares, circles, etc. (b) Using more elaborate units formed by filing or cutting the sticks. (c) Using "lino-stamps" on which units of more free but still very simple design are cut by the student. The use of the foregoing in the decoration of finished articles and in the preparation of patterned cover and end-papers.

SYLLABUS OF WORK

2. The use of very simple lino-cuts for the printing of labels for initials, numbers, monograms, symbols, etc.

3. The decoration of cover and end-papers by the use of paste colour, decorated by brush marks, combing, or dry stamping. The making of stick-printed patterns on a paste-coloured ground.

4. The making and use of very simple stencils in decorating articles produced during the course.

LETTERING. The use of the broad pen in straightforward Roman lettering (upper and lower cases) applied to the titling of books, the writing of owners' names on articles produced during the course, the lettering of labels, invitations, headings, etc.

*Stoneleigh,
New Milton, Hants.
May, 1931.*

STEWART TAYLOR,
Secretary.

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